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Groundnut

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GENERAL EDITOR

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GROUNDNUT

GROUNDNUT

(Marketing and Other Allied Problems)

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CONTENTS

Section		Page
	Illustrations	.. vii
	Preface	.. ix
I.	Groundnut—its cultivation	.. 1
II.	The Acreage of cultivation	.. 10
III.	Production	.. 21
IV.	Agricultural Research and the groundnut crop	.. 30
V.	From the cultivator to the exporter	.. 41
VI.	Co-operative marketing	.. 49
VII.	Regulated Markets in India	.. 56
VIII.	The Madras Commercial Produce Markets Act—its working in South Arcot District	.. 64
IX.	Transport Charges	.. 76
X.	Export Trade	.. 82
XI.	Prices	.. 97
XII.	Finished Products	.. 108
XIII.	Conclusion	.. 112

Appendix A.

Table	I.	Estimated Acreage of Groundnut in the Principal Producing Countries	.. 121
	II.	Area under Groundnut crop cultivated in each Province	.. 122
	III.	Acreage under Groundnut in the Madras Presidency	.. 124
	IV.	Percentage of Area under Groundnut to Total Area Sown (In Madras Presidency)	.. 127

CONTENTS

PAGE

V. Estimated Production of Groundnut in the Principal Producing Countries .. 128

VI. Yield of Groundnut in Provinces .. 129

VII. Yield per acre of Groundnut in each Province .. 131

VIII. Warehouses (Progress Statement) .. 133

IX. Total Exports of Groundnut from all ports in India .. 134

X. Distribution of Exports of Groundnut .. 135

APPENDIX B.

Abstract of the Report of the Administration of the South Arcot Groundnut Market Committee, Cuddalore for the year ending 1940 .. 138

APPENDIX C.

Questionnaire .. 141

Bibliography .. 145

Index .. 147

ILLUSTRATIONS

		Facing Page
	Groundnut plant *Frontispiece*	
I.	Map of India showing the Distribution of Groundnut Acreage	8
II.	The Position of Groundnut in relation to other crops in India	15
III.	Groundnut: Distribution of Acreage	17
IV.	Different Varieties of Seeds	39
V.	The Picking Process	43
VI.	Open Air Stocking	47
VII.	Test Weighment	47
VIII.	Graph showing Exports of Groundnut	87
IX.	Graph showing London and Madras Prices	103
X.	Country 'Chekku'	110
XI.	The Oil Press: Working Section	110
XII.	The Press: Pressing Section	110
XIII.	The Expeller	110
XIV.	The Expeller and Filter	110
XV.	The Shipping of Groundnut: The Wharf at Cuddalore, O.T.	110

PREFACE

Groundnut is the chief commercial crop of the South Arcot District; and till recently large exports of this crop were sent to foreign countries through the ports of Pondicherry and Cuddalore. The outbreak of war in September 1939, however, meant the closure of the Continental markets to India, and at present there is little or no foreign trade in this oil-seed on account of the serious repercussions the war has had on shipping and shipping space, insurance rates and freight charges.

But, owing partly to the suddenness of the war and partly to the want of adaptation or foresight on the part of Indian cultivators, the output of the crop in this country did not materially decrease with the changed circumstances of trade and transport. Consequently, the home market has been glutted with groundnut, disastrously affecting producers and dealers as well.

The loss to cultivators was so great and the market position of groundnut so serious that the Government of India has had to take up the problem and convene a Conference to devise ways and means of solving it. The Economic Adviser to the Government had earlier suggested a scheme of restricting production. However, the Conference, of which the representatives of Provincial Governments were also members, decided merely to adopt certain measures to combat the glut in the market. A provincial Conference was also convened by the Government of Madras for the same purpose.

The problem of a glutted market, however, can hardly be solved adequately by anything but a detailed and extensive survey of production and distribution, with their manifold aspects; and for this reason and as a sort of experimental beginning, an attempt was made by the writer to effect a survey of the conditions of production and distribution in the District of South Arcot, as being more or less typical of conditions now prevalent in this country. The survey has made it possible to study at first hand the serious condition of the cultivators in the villages. It has also been possible to visit the Marketing Committee as well as the principal firms exporting groundnut in this district. In order that the problems of scientific cultivation and the methods of improving the crop

may be examined in their bearing upon marketing, I have had to obtain the assistance of the Agricultural Department and also visit the Agricultural Research stations at Palur and Tindivanam. The brief survey contained in this book is one of similar surveys of importance made in the District of South Arcot under my initiative and guidance. I wished to undertake the study of Groundnut as long ago as 1932 owing to its importance to the producer as well as the exporter. I submitted then a Scheme of Survey to the Agricultural Research Council, but, while the Council received the scheme with considerable favour, it decided to postpone the question for a time.

An appropriate opportunity to begin a study of the groundnut problem was offered by the market crisis resulting from the war, and I took up the investigation promptly. I had myself to meet the expenses of the enquiry and hence I was reluctantly compelled to limit the scope of my studies to an examination of the conditions in South Arcot only and to the consideration of but a few of the more important aspects of the problem. Pressure of work would not, moreover, permit me to undertake extensive or ambitious schemes of investigation. Though I have ventured to publish the brochure, I may say that studies such as this can have no pretension to be either exhaustive or complete, but they provide useful information and are suggestive of the methods of investigation which can be profitably pursued either by educational or public bodies in the best interest of industry and trade. These studies are merely convenient sources of information on particular topics of economic importance.

In this small book on groundnut an effort has been made to study the production of the crop with reference to the acreage under it and the means of improving the yield. The problem of marketing has been considered, the place of market committees and the advantages of co-operative marketing have been dealt with, and the role of middlemen has been discussed. Freight rates have then been scrutinized. Prices have been studied in detail, specially with reference to the London market and the part played by exporting firms. In considering export, the reasons for the fall in the off-takings of Indian groundnut by foreign buyers have been examined. In conclusion, the problems of restricting cultivation, of the payment of subsidies, of refraction analysis and of the need for revising contract forms, have been briefly dealt with. Suggestions for the improvement of marketing have been given and a plea for the utilization of groundnut for industrial needs has been made.

For collecting information, I sent my Research Student, Mr. S. Hariharan, B.A. (Hons.), to various centres in the district, and he has done very useful work. In the collection of statistical data and in the collation of reports, difficulties were met with in getting relevant material and in choosing information on which there was agreement between Government and non-official reports. Mr. S. Tiruvengadathan, B.A. (Hons.), gave me valuable assistance in collecting statistics.

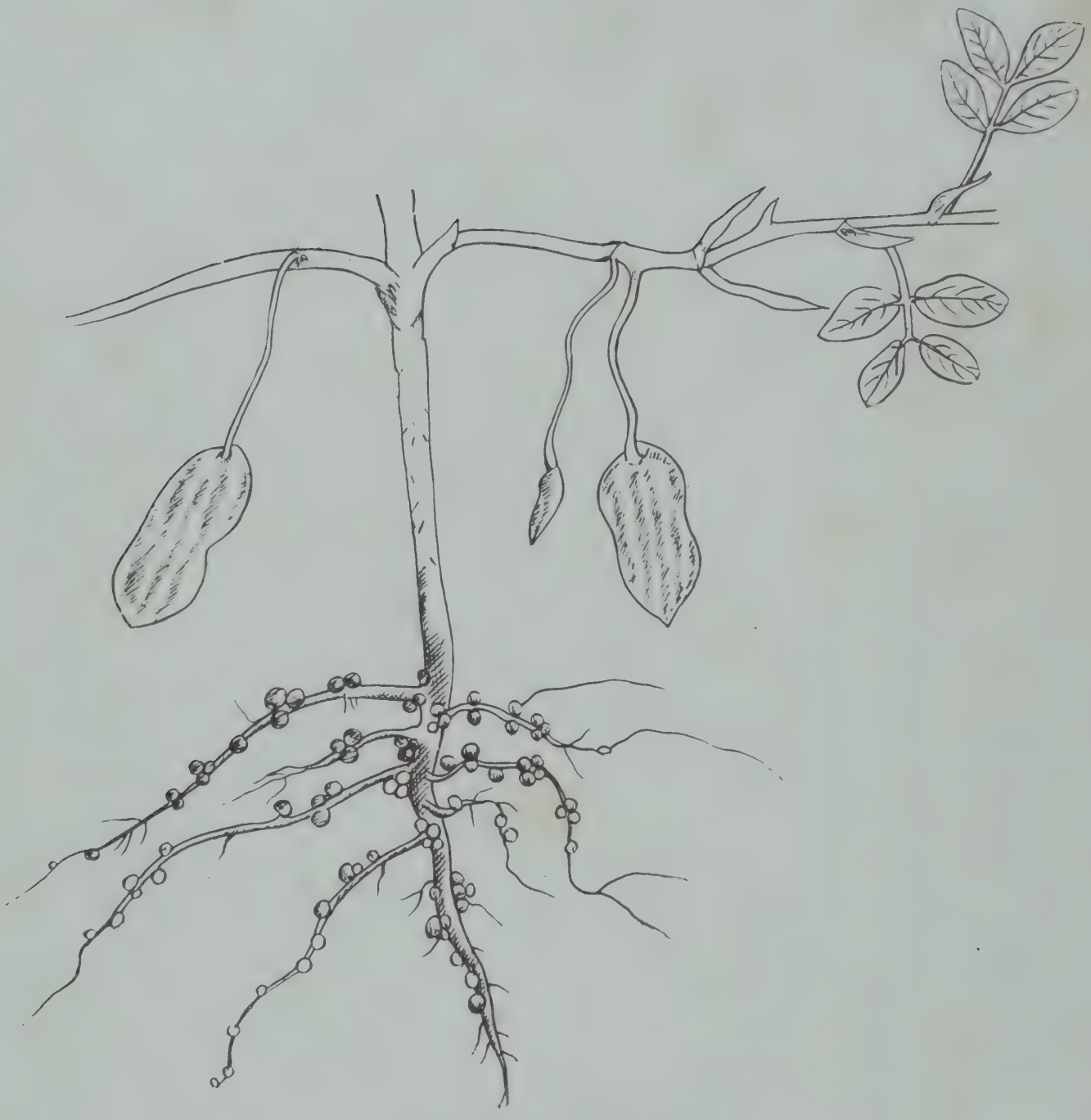
I may also acknowledge with pleasure that I profited a great deal by my discussion of the problem with the Kumara Rajah of Chettinad, Member, Export Advisory Council, who has taken a considerable interest in the groundnut problem and is anxious to improve the lot of the producers.

It is my duty to thank the officials of the Agricultural Department at Tindivanam and Palur for their readiness and co-operation in providing the necessary information. Their encouragement has been valuable. The staff of the Marketing Committee at Cuddalore were also very helpful. The Co-operative Department, traders and exporting firms at Cuddalore and other places gave generous assistance in collecting data.

I owe my thanks to Mr. L. K. Govindarajulu, who read the proofs and prepared the photographs for print, and to my students Messrs. R. Vasudevan and G. Rangaramanujam for helping me.

May 1941,
Annamalainagar.

B. V. NARAYANASWAMY.



THE GROUNDNUT PLANT

Section I

GROUNDNUT—ITS CULTIVATION

Groundnut is cultivated both as a rain-fed and also a hot weather irrigated crop. The new "Saloum" variety introduced recently has gained ground and has been slowly extending to the various parts of the district. The crop is sown generally as a mixed crop and is cultivated along with Tenai or Ragi where well-irrigation is in practice. In hot weather, Ragi is first sown or planted, and groundnut is subsequently dibbled in when the cereal is in flowers. Occasionally it is grown as a pure crop, in which case it is sown early in January. As the cultivation of the dry crop is profitable, there is a tendency to utilize more cattle manure in these lands than on wet ones. Though the cereals are inter-cultivated with this crop, yet the yield of groundnut has not gone down. On the other hand, the yield has increased owing to the recuperative effect the groundnut crop has on land. The inter-cultivation of groundnut with cereals provides the thick population of this district with a means of improving its poor income.

Since the market for groundnut has been declining in recent years, there has been an attempt on the part of some ryots to change over to cotton cultivation to a certain extent. This new crop is slowly being introduced in the South Arcot District and there is a ginnery working at Villupuram.

The groundnut plant is an annual herbaceous plant, belonging to the natural order of Papilonaceae, with pea-shaped flowers. The leaves have four leaflets which are arranged on the leaf-stalk in two pairs exhibiting sleep movements at night. The stem attains from one to three feet in height according to the variety and the soil in which the plant is cultivated. Though there are several varieties of this plant under cultivation in different parts of the globe, the two varieties that are commonly met with in India are the spreading and bunch types. The commercial classification of the varieties is based on the shape of the mature pods, the number and colour of the seeds they contain and the manner in which the pods are produced on the stem of the plant.

GROUNDNUT

The common variety that is grown in South Arcot takes five to six months to mature. In the initial stages of the plant's growth very little moisture is required. Till the flower begins to appear, the plant can withstand drought. As such, the sowing period is so selected as to make rain available in the last phase of the plant's life. In those tracts where the influence of the South-West monsoon is meagre, but are affected by the North-East monsoon, sowing operations are undertaken towards the end of July or at the beginning of August. In tracts having summer showers with seasonal rains from the middle of May, the crop is raised in April. In brief, the cultivator adjusts the sowing according to the seasonal rainfall of the tract.

Loose sandy loam is best fitted for the raising of this crop. Cultivation in heavy soil increases the cost of production and lowers the yield. The land is well drained before sowing as the plant will get diseased if water is allowed to stagnate in the field. Even a slight rainfall at the initial stages of the plant's growth will adversely affect the growth of the plant.

The land is first prepared for the crop by weeding in the initial stages. Weeds like Hariali and Korai seriously hamper the growth of the plant, affecting the yield. Hence the weeds, which grow after the seasonal rain, are first cleared in order to keep the beds clean. After weeding, the land is ploughed two to six times before manuring.

Manure is applied to the land before the last ploughing. Five to ten cartloads of manure, a mixture of ash, town or village sweepings and cattle manure are applied to an acre of land. In addition to these, tank silt and sheep penning are also spread over the field.

A few days after sowing, the nuts germinate. Slowly the plant covers the ground and begins to produce flowers. The rate of growth of the plant determines the rate of production of flowers. The maximum growth is seen during the third and fifth fortnight. Hence this period is termed the "grand period of growth." Followed by this period, is a decrease in the rate of growth, with a subsequent increase. After that there is a gradual decrease in growth. The critical period in its growth, which is definite but varying, is just before the first fortnight of flowering. It is necessary to see that this period coincides with the most advantageous part of the season so that the best development of the plant may be obtained.

Regarding flowering, there are three distinct phases. The bunch varieties of short duration start flowering about the 23rd day after sowing. After the first flowering, there is a rapid and steep increase in the production of flowers. After a week when the maximum rate is reached, there will be a progressive fall. In the local and "Saloum" varieties the flowering period begins after 34 and 32 days. As already remarked, the period of flowering lasts for a month.

The soil is loosened with the hand hoe to enable the plant to grow well. For this, labour is essential and, therefore, any scarcity of labour will greatly handicap the growth of the plant. Wherever scarcity of labour is felt, the method of sowing the crop in rows, intercultivation and the use of the bullock hoe, are strongly recommended by the Agricultural Department. Frequent hoeings are necessary to increase the growth of the plant. No stipulation as to number of hoeings can be made, for they depend on the soil and the variety of crop sown. But it can be said with safety, that such a procedure has to be continued for the first three months of the plant's growth. When the seasonal rains cease, the hoeings are done in order to retain the moisture in the ground and also to prevent the emergence of weeds. As the interspaces between plants are ample, bullock hoes can be utilized for hoeing.

Groundnut is cultivated as a mixed crop in many tracts. In South Arcot, it is grown along with cereals like Cholam or Cumbu. For this purpose "long duration varieties" are chosen, so that when the cereal is ready for harvest, the groundnut crop will be sufficiently grown up. Till then the cereal will serve to shade the young plant.

The method usually adopted is to broadcast the seed of the cereal and then level the ground. The seed-bed is made firm by dragging a harrow across the ploughing. When the cereal has grown six inches, weeding and hoeing are undertaken. Hoeing and weeding are repeated when the rains set in and the land is thus prepared for the sowing of groundnut which is done when the cereal begins to flower. The groundnuts are then dibbled in nine inches apart. This mode of cultivation greatly benefits the cereal crop.

For sowing, the cultivators purchase seeds occasionally. Clean pods are purchased and are shelled by hand. Only well-filled kernels are used for sowing, and mouldy ones are rejected.

The cultivators drop the seed into the plough furrow behind each plough when the crop is raised as a pure one. This involves hardship to

the cultivator, for, as the plants are too close, their full growth is checked and further hoeing operations cannot be successfully caried out. Besides this, if heavy rain sets in, the plots get water-logged and thus the plants are injured.

An improved method of sowing is generally to drop the seed at intervals of six to nine inches into every third plough furrow according to the quality of the soil. This procedure saves a considerable quantity of seeds and also reduces the cost of cultivation.

When the pods are formed at the end of the fourth month, the plant is ready for harvest. The stalks of the underground pods get dried and the skin of the kernels turns pink. This is the proper time for the crop to be lifted up. Even at this stage some pods may be immature.

The method of harvesting differs according to soil and climate. In South Arcot, in light loamy soil a mammottie is attached to a drought pole and worked like a plough to loosen the soil to a depth of about four inches. If the crop is too ripe or if the soil has hardened, many of the nuts may stick to the soil. To remove them, the pods at the top are taken first and pods adhering to the stem are picked next. Then the soil is loosened and the pods left underground are raked and picked.

When the harvesting is over the produce is spread in the open air in sunlight for drying and at nights they are heaped up and covered with straw. This process is repeated until the pods are completely dry.

We have already noted that the crop is also raised as an irrigated summer crop. Since it is a profitable venture, the cultivators adopt this procedure.

The crop is grown as a mixed one along with a cereal like ragi or cholam which is broadcast in the field when sown. When the crop is raised as a pure one, the seeds are dibbled in at 6″ to 9″ apart in the dry beds and watered immediately. At times the cultivators sow the local Mauritius variety close together but this entails heavy expenditure as we have already noticed.

Various methods of cultivation have been tried for experiment in the Agricultural Research Station, Palur, and the results recorded. One of its improved methods is as follows:—Seeds are sown in the furrow of every third plough furrow at intervals of 6″—9″. Before sowing the land is well irrigated and left dry. As soon as the soil is dry, it is

levelled by means of a harrow in order to preserve the moisture in the soil to facilitate germination.

Being an irrigated crop, sufficient drains are made for water to flow. If the land is uneven, subsidiary channels are constructed across the rows from where the crop can be irrigated in each direction along the furrows. The furrows are occasionally raked with bullock-hoes to prevent evaporation. In the initial stages the irrigation is done once in a fortnight. The length of the interval between the irrigations varies with the texture of the soil. Hoeing and weeding operations cease when the plant begins to spread out. The furrows are kept open for frequent irrigation. When the pods begin to mature irrigation is stopped. Harvesting is done in the same manner as the rain-fed crop.

The yield varies according to the variety and also the manner of cultivation. As a rainfed crop, the bunch and spreading varieties produce on an average 750 lbs. and 1,000 lbs. of pods respectively. On the other hand, the yield has been calculated at 2,000 lbs. and 2,500 lbs. for the bunch and spreading varieties when cultivated as an irrigated crop.

The cost of cultivation for both forms, rain-fed and irrigated, is tabulated below to show the difference in the expenditure involved. The net profit has been calculated to indicate which procedure is more paying. The figures are compiled from information gathered from the Tindivanam Agricultural Research Station.

[Experiments regarding yield, the variety to be utilized for maximum production and for thwarting pests and diseases, are described in later sections.]

Cost of Cultivation Tables.

(Spreading type—calculated per acre).

Rain-fed

1. *Preparatory Cultivation.*

	Rs. as. ps.	Rs. as ps.
Ploughing four times—6 pairs @ 10 annas a pair (including those for covering manure and sowing) ..		3 12 0

GROUNDNUT

		Rs. as. ps.	Rs. as. ps.
2.	*Manures and Manuring.*		
	Cost of ten cart-loads of manure @ 6 annas a cart load ..	3 12 0	
	Charges for carting—2 carts @ Re. 1 per cart ..	2 0 0	
	Spreading manure—6 women at 2 annas each ..	0 12 0	
			6 8 0
3.	*Seeds and Sowing.*		
	Cost of 75lbs. of kernels at 16lb. a rupee	4 11 0	
	Sowing behind country plough and covering with brush harrow—¼ pair @ 0-12-0 a pair and 2 women @ 2 as. each ..	0 7 0	
			5 2 0
4.	*After Cultivation.*		
	Hoeing and weeding twice—24 women @ 2 annas each ..		3 0 0
5.	*Harvesting.*		
	Mammootie digging—12 men @ 3 annas each	2 4 0	
	Stripping pods from vines and picking pods left out in the soil—60 men @ 2 annas each ..	7 8 0	
	Drying and cleaning—4 women @ 3 annas each ..	0 12 0	
			10 8 0
6.	*Assessment.*		1 0 0
			29 14 0

Total cost of cultivation per acre for the rain-fed crop is Rs. 30-0-0 approximately.

Value of the Produce.

	Rs. as. ps.
Yield of pods—1,200 lbs. per acre or 900 lbs. of kernels. Cost of 900 lbs. of kernels @ Rs. 25/- per candy of 531 lbs. is =	43 0 0
Value of haulms, 2000 lbs. @ 1000 per rupee	2 0 0
Total cost of produce ..	45 0 0
Net profit per acre .. Rs.	15 0 0

Irrigated Crop

	Rs. as. ps.	Rs. as. ps.
1. *Preparatory Cultivation.*		
Ploughing four to six pairs @ 10 annas a pair (including the one for covering the manure) ..		3 12 0
2. *Manures and Manuring.*		
Cost of 10 cart-loads of manure @ 6 annas a cart-load ..	3 12 0	
Carting charges for two carts @ Re. 1 each ..	2 0 0	
Spreading manure—6 women @ 2 annas each ..	0 12 0	
		6 8 0
3. *Seeds and Sowing.*		
Cost of 64 lbs. of kernels @ 16 lbs. a rupee	4 0 0	
Forming beds and sowing ..	2 6 0	
		6 6 0
4. *After Cultivation.*		
Hoeing and weeding—32 women @ 2 as. each	4 0 0	
Irrigation—12 times at Rs. 2|- each	24 0 0	
		28 0 0

GROUNDNUT

	Rs. as. ps.	Rs. as. ps.
5. *Harvesting.*		
Mammootie digging—16 men @ 3 annas each ..	3 0 0	
Stripping pods and picking pods from the soil—100 women @ 2 annas each ..	12 8 0	
Drying and cleaning—8 @ 3 as. each	1 8 0	
		17 0 0
6. *Assessment.*		2 0 0
		63 10 0
		or
		64 0 0

Value of the Produce

Yield of pods—2,400 lbs. per acre or 1,800 lbs. of kernels. Cost of 1,800 lbs. of kernels @ Rs. 25/- per candy of 531 lbs.	86 0 0
Value of haulms—4000 lbs. @ 1,000 lbs. per rupee ..	4 0 0
Total value of the produce ..	90 0 0
Net profit per acre on the irrigated crop	26 0 0

N.B. :—The price of groundnut in calculating the value of the produce was taken to be Rs. 25. It should be borne in mind that the ruling price is only about Rs. 19.

MAP OF INDIA SHOWING THE DISTRIBUTION
OF GROUNDNUT ACREAGE

Section II

THE ACREAGE OF CULTIVATION

The groundnut of commerce is known by several common names, such as peanut, earthnut, chinese-nut and l'archidaeu. In India and other countries where it is grown, it is differently known in the vernacular languages by names which are merely translations of one or the other of those mentioned.

The plant which produces groundnut is known botanically as "Arachis hypogea." It is unknown in a wild state and its native country has been a matter of uncertainty. There is reason to believe, however, that it originated in tropical South America, since several species belonging to the genus Arachis are commonly found in that continent. There are other species of peanuts, among which may be mentioned "Arachis nambyquarae, Voandzeia subterranea, and Stylosanthis mucrowata." Arachis nambyquarae like Arachis hypogea, is freely found in Brazil. It is cultivated by the Nambyquarae Indians in Rondonia, Matto Grasso. It is surmised that peanut was first carried from Brazil to Africa by slave ships; by the same manner it was conveyed to Virginia from the African shores.

(*a*) *World acreage*†:—The important groundnut producing countries are India, China, United States, Senegal, Nigeria, French Sudan, Gambia, Dutch East Indies, Japan, Spain and Argentina. China comes next to India with two billion pounds per year. The nuts are grown in most parts of China but the chief producing provinces are Shantung, Kwantung, Honan and Chikli. Manchuria also produces large quantities of groundnut. Although a small podded variety was grown in China for a long period, her extensive peanut industry had its real beginning only by 1889, when Archdeacon Thompson, an American missionary, took four quarts of Virginia peanuts to Shanghai.*

† Vide Appendix: Table I.

* Vide "Vegetable Fats and Oils" by Jamieson. Monograph No. 58, pp. 132.

Next to China come the United States and Senegal in order of importance with annual average yields of over 700 million pounds of peanuts. In the United States the peanuts are grown throughout the southern states but commercial production is chiefly confined to rather limited areas.

The statistical data available for groundnut production for the years prior to 1914, are not satisfactory and complete. But judged from exports, the acreage and production were probably about one third of their post-war maxima.

With the close of the Great War in 1918, the cultivation of groundnut began to increase markedly. The acreage under groundnuts in those countries for which statistical information is available rose from an average of 6·6 million acres in 1924—1926 to an average of 9·8 million acres in 1930-32, showing an increase of 48·5%. In 1930-32 more land came to be utilized for the cultivation of groundnut, thus affecting the world total acreage. As compared with 1924-26, the acreage of cultivation in India had increased by 60% in 1930-32, owing to a greater variety of uses for which the produce came to be utilized during the interval. The next largest increase was noticed in U.S.A. where a rise of about 40% brought the average acreage during 1930-32 to 1·4 million acres. In the other countries the acreage of cultivation remained stable; none of them showed any decline.

Though there was a downward trend in India during the depression, soon an upward march was noticed, and it reached its maximum in 1933 contributing about 7,586,000 acres. After 1933-34 there was a retrograde step in this increase in acreage, but in 1937 it recorded 8,652,000 acres. Though complete figures for China are lacking, it has shown rapid strides in recent years in the cultivation of groundnut, recording nearly 3,686,000 acres. With a record of steady increase up to 1932, U.S.A. had a decline in 1933 with a gradual recovery extending to 1936. But 1937 recorded a slight decrease. After a fall in 1933, Senegal experienced a gradual rise up to 1936. In Argentina there was a steady increase and the figures show that there is a two-fold increase in 1936 when compared with the figures for 1930.

(*b*) *India** :—Historical records refer to the existence of the groundnut plant in India as early as the 16th century. As a commercial

* **Vide Appendix: Table II.**

crop it remained in darkness as late as the second half of the nineteenth century. Between 1850 and 1890 the area under cultivation is shown to have increased from 4000 acres to 275,000 acres. Thus within forty years the figures showed an increase of over sixty times. But the country was not fortunate enough to benefit by this prosperity, for a devastating plant disease vitally affected the crop and greatly reduced the output with a subsequent shrinkage in the acreage under cultivation. The repercussions of this visitation were keenly felt in subsequent years. But the introduction of a new variety soon after averted a catastrophe at the proper time. It not only resuscitated the cultivation but doubled the acreage under groundnut. As a result of it, the plant was cultivated over two million acres in 1914.

When the Great War broke out in 1914, the Indian groundnut trade received a set-back. Continental ports ceased to operate during that period, and Marseilles, the chief importer of groundnut was almost closed to the Indian exporter. Moreover, the scarcity of shipping space, higher freight and insurance charges, and exchange difficulties, increased the hardships of the exporter of the produce. Consequently, the area under cultivation of groundnut came to be reduced. In 1915-16 there was a fall in the acreage of cultivation under groundnut by nearly 700,000 acres from 2,144,000 in 1914 to 1,411,000 acres in 1915-16 in British India. The closing years of the war saw the area under cultivation of groundnut reduced to 1·7 million acres as compared with about 2 million acres in 1914-15 for British India.

Area in thousands of acres.

Year.	*Total acreage.*
1914-15 ..	2,144
1915-16 ..	1,411
1916-17 ..	2,069
1917-18 ..	1,687
1918-19 ..	1,158
1919-20 ..	1,306
1920-21 ..	1,824

It took two years to recover the original position in acreage. From 1920-29, there has been a gradual rise in the acreage under cultivation with only slight interruptions in the case of British India. In 1929 the area under cultivation was about 6,436,000 acres for the whole of India, nearly thrice the pre-war average. The following figures will illustrate the trend of increase in the acreage:—

In thousands of acres

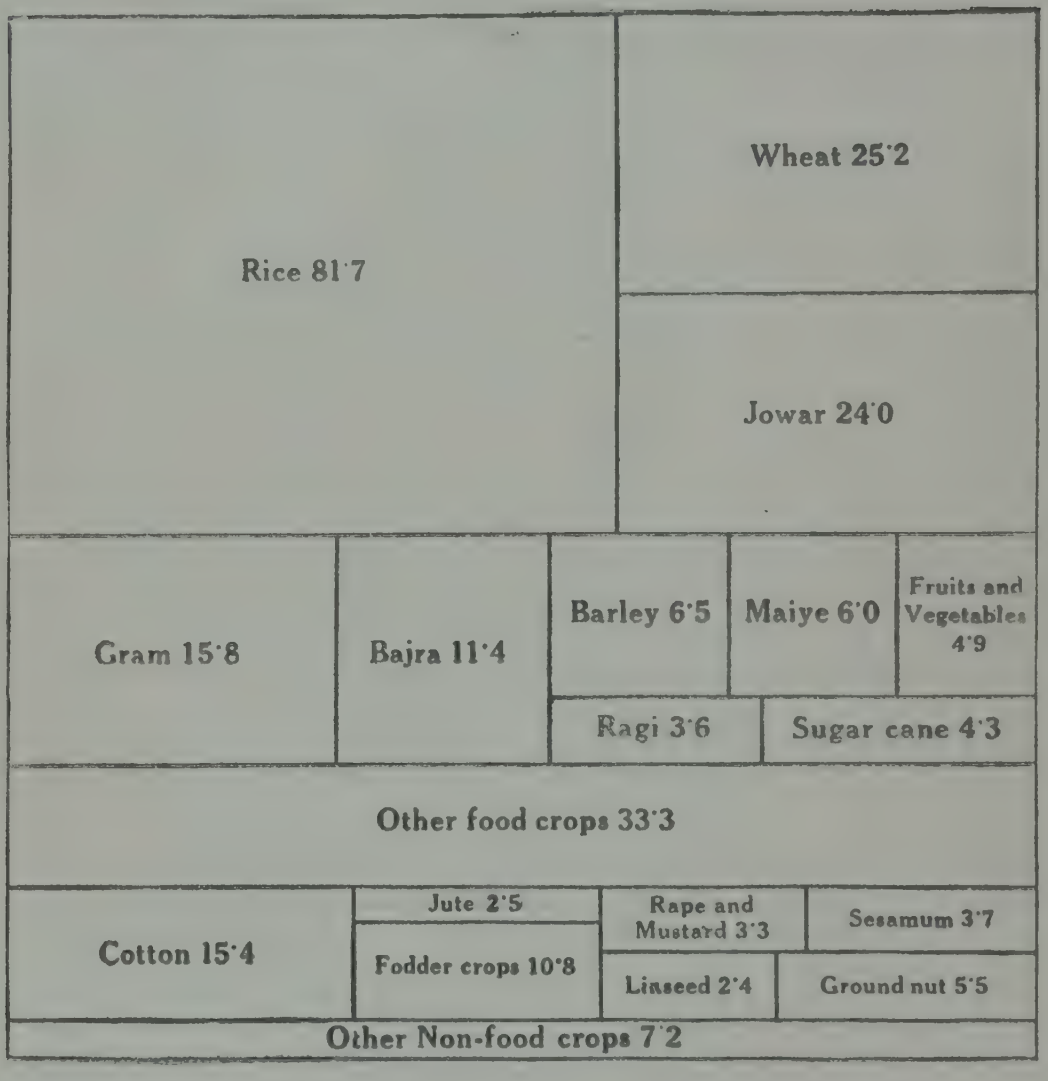
Year.	*India.*	*British India.*
1920-21	2323	1824
-22	2367	1682
-23	2774	2301
-24	2958	2207
-25	3181	2289
1925-26	4259	3474
-27	4442	3493
-28	5536	4401
-29	6436	5102

The above figures illustrate that in 1925-26, the acreage under cultivation falls short of double the acreage of 1920-21 by less than two hundred thousand acres for British India. From 1925-26 onwards until the beginning of the depression the British India figures show a regular increase as in the case of the whole of India.

The depression also affected the area under cultivation. There was a fall of roughly 600 thousand acres between 1928 and 1929 and about a million acres in 1931-32 in the acreage of British India alone. But in 1933-34, with the beginning of recovery, the acreage increased to nearly six millions for British India and eight million acres for the whole of India.

The following table shows the trend of cultivation of groundnut for the years following the depression.

THE POSITION OF GROUNDNUT IN RELATION TO OTHER CROPS IN INDIA



In thousands of acres

Year.	India.	British India.
1929-30	5,700	4,558
30-31	6,014	5,323
31-32	5,081	4,306
32-33	6,887	5,488
33-34	7,586	5,948
34-35	5,163	4,016
1935-36	5,197	3,900
-37	6,663	5,511
-38	8,652	7,109

It may be interesting to note here that groundnut has been gaining in importance among oil-seeds throughout the period, 1913-34. Its share in percentage of the total oil-seeds raised including Sesame, Rape and Mustard, Linseed and other oil-seeds, is shown in the table below:—

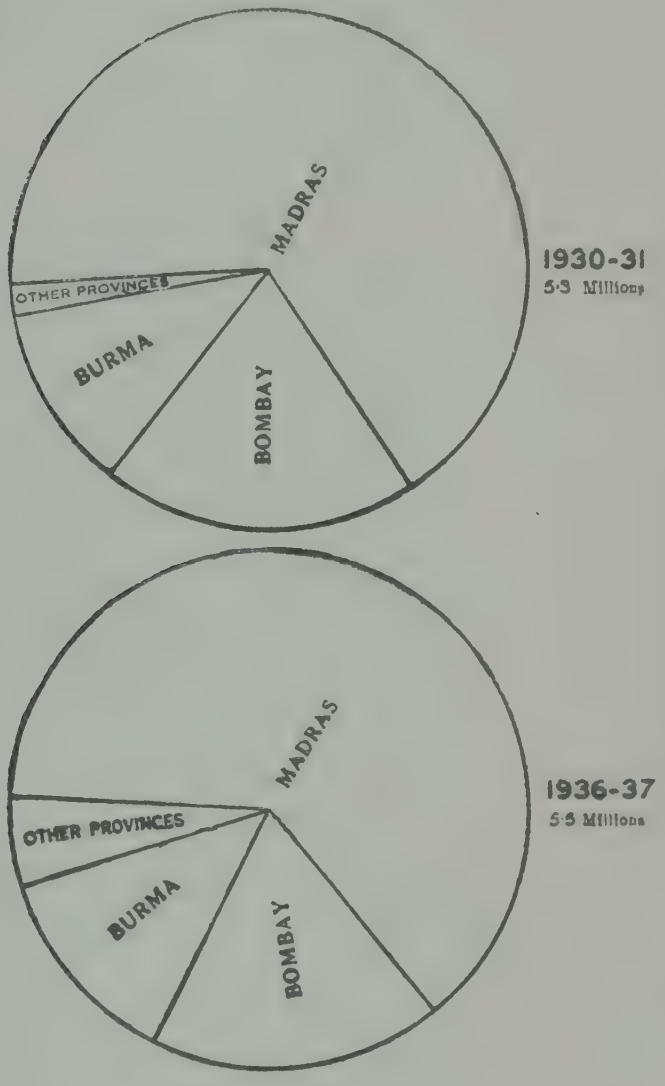
*Share of Groundnuts in percentage to total oil-seeds**

Year.	Percentage.	Year.	Percentage.
1913–14 ..	11	1924–25 ..	16
–15 ..	13	–26 ..	21
–16 ..	10	–27 ..	22
–17 ..	13	–28 ..	26
–18 ..	12	–29 ..	27
–19 ..	12	–30 ..	28
–20 ..	10	–31 ..	25
–21 ..	14	–32 ..	22
–22 ..	12	–33 ..	26
–23 ..	15	–34 ..	29
–24 ..	15		

*Vide "Survey of Oil Seeds," Vol. III.

GROUNDNUT :

DISTRIBUTION OF ACREAGE



The table reveals how in a few years of prosperity preceding the depression, groundnut has been successfully displacing the other oil-seeds. It may be pointed out that from 10% in 1919-20 and 16% in 1924-25 it rose up to 28% in 1929-30. The pictogram in the adjoining page illustrates the position groundnut occupies among the crops raised in British India.

(c) *Madras Presidency*§:—Of all the groundnut producing centres in India, Madras occupies the premier position, contributing about 60% of the total production. A review of the statistical tables will clearly show how there has been an increase in the average area under cultivation. From 1·8 millions in 1914-15, it increased to 3·77 million acres in 1938-39. Thus while there is a marked increase in the area under cultivation, relatively speaking, *i.e.*, when compared with total acreage, Madras has been periodically experiencing serious fluctuations. The following table will clearly show the truth of the above statement.

Area under groundnut crop in Madras and percentage to total area under oil-seeds.

Year.	*Madras Presidency.*	*Percentage.*	*Total acreage in India.*
1920-21	1,599,738	45·7	2,323,000
21-22	1,459,122	43·2	2,367,000
22-23	1,754,334	49·3	2,774,000
23-24	1,807,353	50·5	2,958,000
24-25	1,904,119	50·8	3,181,000
25-26	2,598,609	57·8	4,289,000
26-27	2,680,156	59·7	4,442,000
27-28	3,336,536	63·6	5,536,000
28-29	3,679,349	66·7	6,436,000
29-30	3,209,315	64·3	5,700,000
30-31	3,575,157	67·1	6,014,000
31-32	2,635,427	59·5	5,081,000
32-33	3,516,679	64·8	6,887,000
33-34	3,779,365	67·0	7,586,000
34-35	2,350,934	58·0	5,163,000
35-36	2,519,965	60·0	5,197,000
36-37	3,495,023	67·0	6,663,000

§ Vide Appendix: Table III.

GROUNDNUT

The importance of Madras in the field of the cultivation of groundnut is seen "illustrated on page 16." The West Coast being a moist tract with heavy rainfall is suitable for wet cultivation. In the eastern districts, the rainfall being comparatively low, dry cultivation is generally adopted. As such the eastern parts of the Presidency, running from the Chilka lake to Tinnevelly, raise the major portion of the dry crop. Moreover, the soil here is not so hard as in the West Coast. The East abounds with loose sandy loam while the West Coast contains hard laterite. Since groundnut cultivation requires loose soil, it is grown in abundance only to the East of the Western Ghats. A review of the crop report clearly shows that South Canara contributes only 25 acres while the Eastern districts like Coimbatore, South Arcot and Bellary, contribute respectively 189,442, 425,725 and 247,894 acres in 1938-39.

Of all the districts in the Presidency, South Arcot stands unique as the largest producer of groundnut. It is followed by North Arcot, Kurnool, Anantapur and other districts. During the years 1914-18, the cultivation of groundnut in this Presidency had a set back. It went as low as 1,136,142 acres in 1915-16. But after the war of 1914-1918, the total acreage of cultivation began to increase and before the depression, the figure was 3,336,536 acres (1927-28), three times the 1915-16 level. The depression period seriously affected the raising of the crop resulting in a fall to 2,635,427 acres in 1931-32. Soon the cultivation was revived and with a slight set back in 1934-35, the rise continued and touched the peak of nearly 4,657,596 acres in 1937-38. Moreover, the produce came to occupy 67% of the total oil-seeds grown in this presidency.

(*d*) *South Arcot District*:—Groundnut occupies the foremost rank as the dry crop of this district, contributing to the major portion of the produce in this presidency. The largest areas under groundnut cultivation lie in Tindivanam, Tirukoilur, Villupuram, Cuddalore and Vriddhachalam taluks.

As long ago as 1800, Mr. Buchanan travelling across the Carnatic found groundnut being raised in the Mysore plateau. In 1851, the Collector of South Arcot in one of his despatches to the Revenue Board observed that the groundnut crop was a profitable one and already it had taken root in Panruti and Villupuram. Continuing, he said that 3000 acres were being brought under the cultivation of groundnut in

Panruti and 1000 acres in Villupuram taluk.* Slowly and steadily, it gained strength and by the closing years of the last century, it displaced indigo, which till then occupied a premier position. Slowly it spread from Tindivanam to the lands south of Gadilam. From there it spread to Vriddhachalam and finally to Kallakurichi.

Though at first the area under groundnut remained constant, it dropped suddenly in 1896-97 to 88,000 acres, and in 1897-98, to 52,000. The yield per acre slowly decreased thus causing heavy losses to the cultivators. Soon the cultivators began to realize that the prevalent variety had deteriorated and only a new variety would save them from utter ruin and poverty. The exhaustion of the soil and the appearance of numerous plant diseases resulted in further lowering the yield. To the rescue of the cultivators came Parry and Co., who introduced a new variety from Mauritius which bettered the situation. The crop then entered a new phase; and the area under cultivation rose to 133,000 acres in 1889-1900 and reached the maximum of 343,000 acres in 1902-1903.

During the War of 1914-18, South Arcot experienced a downward trend in the cultivation of groundnut which came down to 299,035 acres in 1915-16. But the end of the war saw an increase of 20% in the cultivation. The recovery continued till it reached its peak of 482,978 acres in 1928-29. When the depression set in, there was a shrinkage in the cultivation of groundnut. In the subsequent years there was a slight fall but recovery soon set in and the cultivation reached its zenith in 1937-38, contributing nearly 471,274 acres or nearly 1.6 times the pre-war acreage.

Though there has been an absolute increase in the area under cultivation, there has been a fall as regards the percentage of area under the crop. In 1930-31 the percentage area under groundnut to the total cultivated area was 29 but it slowly went down in 1934-35. Later it rose to 28 per cent in 1938-39. The following table clearly gives the trend.**

* Vide "South Arcot District Gazetteer."

** Details regarding other districts are given in the Appendix: Table IV.

GROUNDNUT

Year.		*Percentage of area under groundnut to total area.*
1930-31	..	29
31-32	..	22
32-33	..	22
33-34	..	25
34-35	..	19
35-36	..	24
36-37	..	28
1938-39	..	28

Section III

PRODUCTION

(*a*) *World.**

Though groundnut has been in existence from very early days, production figures are far from satisfactory prior to the Great War (1914-18). The production figures after 1918 really show a phenomenal increase. Along with this increase in the area under cultivation there has been an increase in total production.

Countries of the British Empire alone account for two-thirds of the world production. India produces about three million tons of groundnut on the undecorticated basis or about one-half of the World's output. China, French West and Equatorial Africa come next, producing about one million tons respectively. It is double the estimated production of British West Africa or the United States of America. Senegal provides more than one-half of the production of French West and Equatorial Africa, while Nigeria accounts for three quarters of the production of British West Africa.

Between 1924 and 1930 production figures rose from 2·7 to 3·8 million tons. The Indian production which was 1·4 in 1924 slowly increased to 2·8 million tons in 1928. The subsequent year saw a sudden fall to 2·4 million tons followed by an increase to 2·5 million tons in 1930. As regards production, Senegal showed a steady increase between 1924 and 1930 recording 0·4 million tons in 1924 and 0·5 million tons in 1930. In U.S.A. the production figures rose from 0·3 million tons in 1924 to 0·4 million tons in 1929. But in the following year the figure dropped to 0·3 million tons; whereas, in Argentina, the production figure which was 0·1 million tons remained constant till 1929, subsequently there was a fall to 0·06 million tons in 1930. Similarly, in the Netherlands East Indies the production estimate which was recorded at 0·2 million tons remained constant till 1930.

After 1930 there was a general fall in the production of groundnut. Almost all countries excepting a few recorded a decrease in the total

* Vide Appendix: Table V.

output. India, the premier country in the production of groundnut, showed a fall from 2·5 million tons in 1930 to 2·1 million tons in 1931. In the same manner, Gambia which recorded 0·07 million tons in 1930 showed a fall to 0·06 million tons in 1931. In Senegal there was a rapid decrease from 0·5 million tons in 1930 to 0·1 million tons in 1931. Likewise, East Indies and Argentina showed a net decline.

Contrary to the above phenomenon, Tanganyika and U.S.A. showed an increase in the total output, while the production in Burma remained constant. In Nigeria the production rose from 0·1 million tons in 1930 to 0·2 million tons in 1931, while in Tanganyika the figure rose from 0·2 million tons to 0·3 million tons in the same period. Similarly, U.S.A. recorded an increase in the total output from 0·3 million tons in 1930 to 0·4 million tons in 1931.

In China, there has been a steady increase in the output since 1931. From 1933, Chinese production increased by leaps and bounds. By the end of 1937, it has been recorded that the production approximately equalled that of India.

(b) *India.**

The following figures clearly record the increase in yield in India after the War of 1914—18 till the beginnings of the depression. This upward trend is noticeable throughout, the output decreasing at intervals.

Total production of groundnut, 1919 to 1928.

In thousand tons.

Year.	*Total Yield.*
1919	822
1920	1,022
1921	959
1922	1,236
1923	1,084
1924	1,485
1925	1,999
1926	2,046
1927	2,718
1928	3,119

* Vide Appendix: Table VI.

A perusal of the above table will illustrate the uniform upward trend after 1923. With an abrupt rise in 1920, the production fell to 959 thousand tons in 1921. The year 1922 saw an increase which was continued till 1928 with a fall only in 1923. The output reached its maximum in 1928 contributing 3,119 thousand tons. Compared to 1929, the average total output for the depression period 1929-32, fell from 3119 thousand tons to 2274 thousand tons.

Total Production of Groundnut.

In thousand tons.

Year.	Total production.	
	All-India.	British India.
1929-30	2,180	1,948
30-31	2,592	2,252
31-32	2,151	1,765
32-33	2,846	2,353
33-34	3,186	2,473
34-35	1,740	1,333
35-36	2,114	1,655
36-37	2,714	2,110
37-38	3,501	2,640
38-39	3,196	2,250

The above table reveals that in All-India as well as in British India the same tendency has been felt as far as production is concerned. During the depression era there was a set-back in the Indian production. In 1929-30 the total output showed a net decline in production amounting to 29 per cent of 1928. But in the following year the production increased to 2,592 thousand tons. This increase was only temporary, for in 1931 there was a decline by 17 per cent of the previous year's figure. From 1932 the output began to increase till 1934 when a fall in production took place. Subsequent years saw an increased production which reached its maximum in 1937-38 recording 3,501 thousand tons. But in 1938-39 production began to fall.

GROUNDNUT

As regards British India, the same conditions existed. With a slight fall in 1931-32, the yield began to increase till 1934-35 when a great fall was recorded. This downward trend did not last long for by 1935 production began to increase and touched its peak in 1937 amounting to 2,640 thousand tons. But the tendency to fall continued and 1938 figures amply prove this statement.

The Native States too are producers of groundnut. Though at first the Bombay States were producing negligible quantities, in recent years their production figures have risen to the level of Hyderabad. Prior to 1934 Mysore was producing a negligible quantity, but the 1938 figure proves that groundnut has come to stay in that State.

Besides the total output, we must see whether there is an increase or decrease in the yield per acre.* A scrutiny of the table appended below will show how there was a tendency for higher yield in the pre-depression period.

Average yield per acre.

(In lbs.)

Year.	Yield per Acre.
1919	1,161
1920	1,076
1921	1,002
1922	1,052
1923	867
1924	1,153
1925	1,127
1926	1,061
1927	1,122
1928	1,124

* Vide Appendix: Table VII.

The end of the War of 1914-18 saw an increase in the yield per acre. But in subsequent years there was a decrease which continued till 1922 when the yield per acre increased to 1,052 lbs. In 1923 the yield per acre decreased to 867 lbs. From 1924 the yield has been almost steady with slight fluctuations.

The following table gives the yield per acre in lbs. for the years 1929-30 to 1938-39.

Year.	Yield per Acre in lbs.		
	Provinces.	Native States.	All-India.
1929-30	1020	577	943
30-31	1104	588	990
31-32	1044	669	948
32-33	1076	647	965
33-34	1052	688	941
34-35	888	512	758
35-36	1045	623	911
36-37	1021	666	912
37-38	950	726	883
38-39	927	706	848

From this table it will be seen that in 1930 the yield per acre for All-India, increased to 990 lbs. as compared to 943 lbs. in 1929. But in 1931 it showed a decline with a recovery in the following year. In the next two years a gradual fall was noticed which touched as low a figure as 758 lbs. in 1934. But during the years 1935 to 1937 there was an increase but subsequently there was again the downward trend.

As regards the Provinces, the yield per acre had at intervals its set-back as well as recovery. With an yield of 1,020 lbs in 1929, it increased to 1,104 lbs in 1930. Next year there was a fall followed by a rise in the subsequent year. The lowest yield per acre was noticed in 1934-35. As a general feature it can be observed that the rise and fall occur in alternate years.

Though the yield per acre displayed a tendency to decrease in the Provinces, the Native States showed an increase. In Hyderabad the rate of yield rose at a rapid rate. In Mysore though the output was poor prior to 1933, it has improved since 1938.

(c) *Madras Presidency.*

Among the principal tracts that raise groundnut, Madras stands foremost. As figures prior to 1919 are incomplete and unsatisfactory, one has to start with the figures for the year 1919 as the basis for further comparison and study.

Total production in Thousand tons.

Year.	Total Output.
1919-20	569
20-21	740
21-22	678
22-23	823
23-24	744
24-25	948
25-26	1,264
26-27	1,207
27-28	1,671
28-29	1,830

With the cessation of hostilities in 1918, the groundnut production began to increase. The above table shows that in 1919, the production was 569,000 tons. Soon an upward trend was noticed and the figure touched its peak in 1923 contributing 823,000 tons. In the following year there was a decrease in production. From 1924, there was a phenomenal rise which lasted till 1928 when it reached its maximum of 1,830,000 tons.

This prosperity did not last long for the depression era soon set in. In this period groundnut production was hit hard. The following table bears out the point.

Total production in Thousand tons.

Year.	Total Output.
1929-30	1,522
30-31	1,765
31-32	1,234
32-33	1,729
33-34	1,777
34-35	920
35-36	1,202
36-37	1,657
37-38	2,059
38-39	1,613

In 1929-30 the production was low. But in subsequent years there was a rise followed by a fall in 1931-32. Though there was a trend towards increase in '32-34, there was a drop in '34-35. From 1935-36 production began to increase and it reached its maximum in 1937-38 with a setback in 1938-39.

Regarding the yield per acre, Madras has had to experience many vicissitudes, and this can be inferred from the following table.

Year.	Yield per Acre in lbs.
1919-20	1,114
20-21	1,036
21-22	1,041
22-23	1,051
23-24	922
24-25	1,115
25-26	1,089
26-27	1,009
27-28	1,122
28-29	1,114

GROUNDNUT

With a fall in 1920-21, an upward trend was noticed in subsequent years but a sudden drop occurred in 1923-24, recording as low as 922 lbs. per acre. In 1924-25 there was a recovery with a fall in 1925-26; and the revival which followed lasted till 1927-28 when it was 1,122 lbs. per acre ; but in the following year the figure went down to 1,114 lbs. per acre.

When the depression set in, a fall in the yield per acre resulted.

Year.	Yield per Acre in lbs.
1929-30	1,062
30-31	1,107
31-32	1,107
32-33	1,101
33-34	1,056
34-35	877
35-36	1,068
36-37	1,062
37-38	990
38-39	958

In the year 1929 there was a fall in the yield per acre compared with the previous year's figure. But in the following year it increased and remained constant for the subsequent years. But in 1934-35 the yield per acre fell to 877 lbs. In the following year a sudden rise was noticed which lasted till 1936. But there was a noticeable fall from 1938 onwards.

In South Arcot, the same tendencies prevailed. After the depression period an increase in the yield per acre was witnessed. This lasted till 1933, when a drop to 918 lbs. was recorded. The following year saw an increase to 1,008 lbs. per acre; but it did not last long, for in 1935 it fell to 986 lbs. The susequent years showed a downward trend which went as low as 795 lbs. per acre in 1938. The following table gives the changes in the yield per acre.

Year.	Yield per acre in lbs.
1930-31	974
31-32	997
32-33	997
33-34	918
34-35	1,008
35-36	986
36-37	918
38-39	795

Section IV

AGRICULTURAL RESEARCH AND GROUNDNUT CROP

Let us examine in this section the improvements suggested and carried out by the Agricultural Department. To ensure economic cultivation and enhance productivity new varieties have been introduced by the Agricultural Department. In order to carry out this purpose, a research station mainly intended for the promotion of cultivation in oilseeds, has been started at Tindivanam. Recently the Imperial Council of Agricultural Research made a grant to this station to intensify the study of the problems connected with groundnut cultivation. The grant was to be spread over a period of five years. The new scheme began its work on 22nd January, 1937.

Let us now see the various experiments conducted by them in different spheres of groundnut cultivation. At first the question regarding the selection of a variety best suited to withstand drought, engaged their attention. Several trials were made and it was found that the bunch varieties were comparatively less resistant to drought than the spreading varieties.

Various bunch varieties were tried and the result was that the "Gudiyattam bunch" and "Small Japan" were found to be fairly resistant to drought while those with four seeded pods and red testa were badly affected. Among the spreading varieties, the "Virginia Runner" (A.H. 7) and "Local Pondicherry" (A.H. 72) were outstanding in their high degree of powers of resisting drought. A selection from "Bassi" (A. H. 477) was found to be well suited for dry areas.

Secondly, selections of the best variety in the bunch as well as the spreading types were tried, keeping a standard variety as control for each.

Bunch Type.

Treatments.	Adjusted yield per acre.	Percentage of general mean.
A.H. 32 (Control) ..	951 lb.	94·2
A.H. 1320 ..	993	98·4
A.H. 1537 ..	1043	103·4
A.H. 1581 ..	1077	106·8
A.H. 1589 ..	1128	111·8
General mean ..	1009	100·0

Spreading

Treatment.	Calculated yield per acre in lb.	Percentage of general mean.
A.H. 25 (Control) ..	1249	107·0
A.H. 554 ..	1171	100·3
A.H. 718 ..	1179	100·9
A.H. 731 ..	1163	99·6
A.H. 678 ..	1222	104·6
General mean ..	1168	100·0*

The foregoing analysis clearly shows that as regards the bunch variety, (A.H. 1581 and A.H. 1589) selections from "Tennessee White" and "Improved Spanish" respectively record a significant increase over the control. While in the spreading, the control, A. H. 25 "Saloum," shows a remarkable yield.

Experiments conducted to ascertain the preliminary yield per variety showed that A.H. 334, a selection from "Carolina," stood unique,

*Vide "Report of the Madras Agricultural Research stations," 1938-39. "Tindivanam Research Station Report."

in that it gave a significant increase of 13·3 per cent over the improved variety (A. H. 25), which, in turn, showed an increase of 26·8 per cent over the local variety.

The effect of climate and soils on groundnuts was also studied and it was found that the selected varieties yielded more than the "local Mauritius." A. H. 477, a selection from "Bassi," gave the maximum increase of 50 per cent. The high degree of drought resistance coupled with its enhanced production will render it a suitable variety for tracts with low and precarious rainfall.

Regarding manure, experiments were conducted. It has been found that potash gives an increased yield. Nitrogen as Ammonium Sulphate affects the yield in the absence of the basal dressing.

Since the groundnut crop is raised as a mixed one with a cereal, workers in the field were engaged to find out a plausible mixture which will bring a higher net return when groundnut is cultivated as a mixed crop than when it is raised as a pure crop. As such, plots were laid out wherein pure as well as mixed cultivation were conducted and the results noted. Whether such mixed cultivation affected the quality of the pods produced, was also noted.

Treatment.	No. of kernels per lb.	Shelling percentage.
Pure	974	70·4
+ Redgram ..	954	71·6
„ + Castor ..	952	70·4
„ + Thenai ..	967	70·1
„ + Cotton ..	970	70·9
„ + Cumbu ..	986	70·7
„ + Cholam ..	970	71·6

From the above we can very easily conclude that mixed cultivation does not change qualitative characteristics.

Profit as per Pure and Mixed Variety

	Net profit per acre.	Duration of the crop.
Groundnut pure ..	Rs. 10 13 5	4½ months.
„ + Cumbu ..	„ 0 14 1	„
„ + Tenai ..	„ 6 10 0	„
„ + Cholam ..	„ 21 3 10	5½ months.
„ + Redgram.	„ 17 13 4	„
„ + Castor ..	„ 24 4 3	8 months.
„ + Cotton ..	„ 17 0 3	8 months.

From a purely monetary point of view, it is always advisable to grow the crop along with castor, since it brings a maximum return. Recently it has been said that mixed cultivation with castor affects the oil content of the groundnut seed. No substantial experimental evidence is, however, forthcoming.

The Order of Yield per Acre

Groundnut Pure	..	1036 lb.	of pods.
„ + Redgram	..	975	„
„ + Castor	..	903	„
„ + Tenai	..	828	„
„ + Cotton	..	813	„
„ + Cumbu	..	721	„
„ + Cholam	..	580	„

To test the effect of electro-culture on the groundnut crop, an experiment was made in Tindivanam, with A.H. 32. Before scrutinising the results, let us see what electro-culture means and how it is applied to plant life.

Dr. S. S. Nehru, I.C.S., conceived the idea of harnessing electrical energy and utilising it for plants as a stimulant. He harnessed cosmo-radio-magnetic energy and applied it towards the growth of the plant. Its results are astounding and far-reaching. It has been more

widely known and practised in Western and Far Eastern countries than in India, the land of its birth.

By electro-culture is meant the stimulation of the already existing electrical energy in the plant. Like other living organisms plants too are made up of cells. Each cell has its own nucleus surrounded by protoplasmic matter. As long as the cell pulsates with life, electrical energy resides in it. In other words, where there is cellular activity, there is electrical activity and *vice versa*. A rise or fall in the cellular activity results in a corresponding increase or decrease in the electrical energy. If there is an inducement in the form of an external stimulus to the electrical activity of the plant, it will automatically increase the growth of the cell and subsequently the whole plant to which the cell belongs. This is the basic idea underlying electro-culture.

Though electricity is a boon to humanity, its utilization in the vegetable kingdom in a simple manner is due to the undaunted perseverance of Dr. S. S. Nehru. Once costly machines were required to carry out the experiment; but Dr. Nehru has invented such simplified devices that they are within the reach of the poor Indian cultivator. The instruments are so cheap that the poorest villager can buy them, and so simple that the dullest head can operate them. They are to Dr. Nehru what the charka and the carding bow are to Mahatma Gandhi. The radio-magnetic energy from the earth will be transmitted to the active regions of the tree so that more flowers and fruits result and a general enhanced growth is found. To supplement this process, Dr. Nehru recommends the irrigation of the plant by Agaskarised water (sparked water). To give further stimulation the weakened tissues are occasionally subjected to sparking. Before seeds are sown they are soaked in Agaskarised water and then broadcast in the field with India rubber gloves covering the hands. This in brief is the out line of electro-culture and its application to plant life.

The results are said to be remarkable and outstanding. Discussing the desirability of its application and its results, Colonel Noel, the Director of Agriculture, North Western Frontier Province, observes :—

" A method of increasing the yield which is extraordinarily cheap, simple and effective is that of electro-culture advocated by Dr. Nehru, I.C.S., of Mainpuri. This treatment has given the astounding result of a 30% increase in yield. The cost is negligible."

To test the efficacy of electro-culture in the cultivation of groundnut, experimental plots were laid out in Tindivanam. Growth measurements were recorded at monthly intervals. The perusal of the figures, showed, however, that growth was not accelerated, and flower production remained normal. The experiments were then discontinued.

Pests and Diseases

Many are the pests and diseases which retard the growth of the plant. They are :—

1. The red-hairy caterpillar,
2. The surul poochi,
3. Wilt,

and 4. Clump.

(1) *The red-hairy caterpillar* (*Ansacta Albistriga*) :—It is a familiar pest in most parts of South India. It is a common feature in red sandy soils soon after the rains. These caterpillars appear in such large numbers when the crops are young that wholesale destruction inevitably results. Usually, this pest attacks most of the rain-fed crops.

If the crops are young when this pest appears, there will be a total destruction; and a resowing of the crop may become necessary. But if the crops are somewhat older, the attack is partial. Flowers are easily susceptible to this attack and when attacked the plants flower again, but a substantial reduction in the total yield is certain.

Various measures have been suggested to ward off this pest. The following are a few. Hand-picking of the moths is one method. As the visitation continues in the same tract from year to year, the farmers can fairly know that the pest has not completely disappeared but lurks in the soil and reappears when the rain sets in. The first rains change the pupae of this caterpillar to moths which will be found sluggishly moving in the field. These moths can be easily distinguished by their white pigment and sluggish habits. Being sluggish, they can be easily picked. Each moth is capable of laying a 1,000 eggs; but efficient hand-picking will prevent their further occurrence.

It is not possible to collect all moths and some may have missed the workers' attention. So, as soon as the eggs are laid it is best that they are collected ; for no sooner the eggs hatch than the caterpillars get scattered.

One other means of warding off the pest is by the collection of pupae and their destruction. During the time of pupation, caterpillars resort to shady places such as the bases of trees or fences near by. With a little experience it will be easy to find them out.

As a further procedure, trenching can be undertaken. When the caterpillars emerge, they appear in legions. To destroy them by spraying disinfectants, is costly. As such, trenches are dug across the path of these caterpillars which march from the infested to the uninfested field. The caterpillars drop into the trenches and they are collected and destroyed.

Regarding the handpicking of moths, the expenditure usually comes to Rs. 2 per acre. "At the time of harvest, statistics of yield of cumbu and groundnut were taken in the area hand-picked as well as in the areas left untreated. There was an average yield of 256·4 Madras measures per acre in the case of pure cumbu fields and 161·5 Madras measures in the case of cumbu sown mixed with groundnut in the area treated, whereas the figures for the same class of crops in the untreated areas were 104·1 Madras measures and 80·1 Madras measures respectively; thus indicating a gain in money value of about Rs. 25 and Rs. 13½ per acre. As such the ryot can very well afford to spend Rs. 2 or more to prevent the loss."*

(2) *Surul Poochi* (*Stomopteryx Nerteria*) attack can be mitigated by the use of light-traps maintained in dark nights to catch the moths.

(3) *Wilt* :—This is a bacterial disease which attacks the plant and retards its growth. To thwart repeated attacks relative resistence experiments were conducted. Many were the selections tried. 'The mortality due to wilt varied from 2·2% in A.H. "Virginia bunch Tanganyika" to 15·2% in A.H. "1722 Florida IV." The "Gudiyattam bunch" too showed an infection of 6·0% while the "Virginia running peanut" and the "Rangoon" variety recorded a high percentage of mortality.'**

Manurial experiments in Tindivanam were carried out to mitigate this wilt attack. Potash was found to a certain extent a feasible antidote

*Vide "Dept. of Agriculture," Leaflet No. 23.

**Vide "Report of the Agricultural Research Stations," 1938-39.

to this disease. Experimental plots have been laid out at present to ascertain when the maximum mortality of the plant due to this disease occurs. The experiments may suggest ways to minimise the wilt attack.

(4) *Clump* is caused by fungus and is of the nature of a virus. It stunts the growth, and affects the production of flowers. The terminal buds get twisted and the leaves begin to curl inwards. This disease attacks the roots of the plant. Experimental measures are being tried to mitigate the disease.

Quality of the Groundnuts

The quality of groundnuts exported from Madras, is not valued by foreign importers on the ground that "Coromandel" variety contains more fatty acid than others. Since groundnut forms about 30% of the exports of Indian merchandise, the exported varieties should be improved in quality. "The Indian Trade Commissioner at London has estimated a loss of about 52 lakhs of rupees to Madras on account of the poor quality of groundnuts."

The poor quality of the nuts is due to the presence of a high percentage of free fatty acids. Both the oil and free fatty acid are interrelated. When the free fatty acid increases in the nut, the oil content simultaneously decreases. The cost of extracting oil increases when there is a higher percentage of free fatty acid content. The oil extracted from such nuts is further of a lower quality and hence it fetches a low price in the market.

Of the causes that contribute to the higher percentage of free fatty acids in "Coromandel" nuts, the first is that farmers, in order to avail themselves of the higher price prevailing in the market, begin harvesting before the nuts are mature. This pre-mature harvest causes the retention of a higher percentage of free fatty acids in the kernels. The harvest of groundnuts even one week before the kernels are fully ripe is said to double the quantity of free fatty acid and reduce the oil content of the kernels by about four per cent. In some places the nuts are harvested two or three weeks before they are fully mature. To minimize the period of growth, the bunch variety can be grown instead of the spreading type as the bunch variety takes lesser time to mature than the spreading one. Immature kernels when dried get

shrivelled and contain less oil and more fatty acid unlike the mature kernels.

When the pods are shelled, they are wetted even when decorticated. Damping increases the fatty acid content and lowers the quality of the nuts.

"Assuming the price of groundnut kernels containing not more than 2·5 per cent of free fatty acids is Rs. 30 per candy of 531 lbs. and supposing that the Madras groundnut on reaching Europe is found to contain 4 per cent of free fatty acids, only Rs. 27 will be paid instead of Rs. 30, Rs. 3 being the discount on account of the extra 1·5 per cent of free fatty acids. If the produce contains 8 per cent free fatty acids, as is not very uncommon, the price to be paid will be Rs. 19 instead of Rs. 30."*

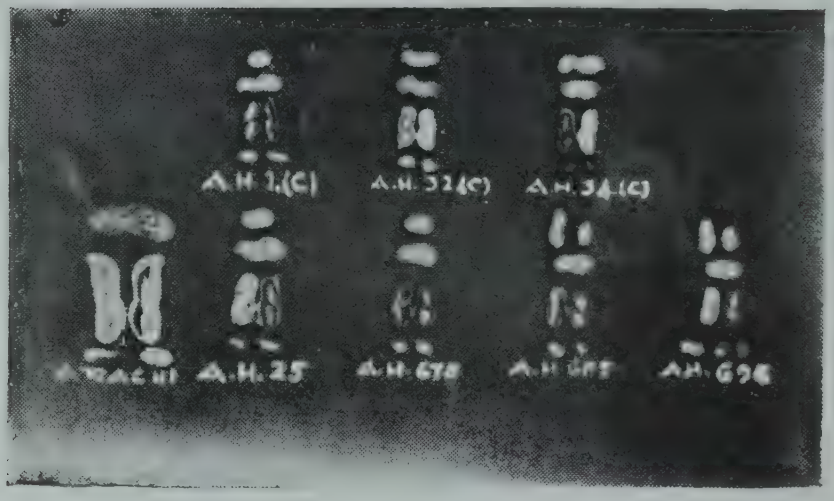
To improve the quality and reduce the free fatty acid content, the wetting which now precedes shelling should first be avoided. Without wetting the produce, decortication can be carried on as is done in Bombay and the Ceded Districts.

The deterioration in quality is also due to improper storage and insufficient drying. The harvested crop contains as much as twenty-five per cent of moisture and the buyers undervalue the product owing to the presence of moisture. Moreover, if the nuts are not properly dried soon after harvest, moulds begin to appear inside the kernels and increase the acidity. After the moulds have once appeared, it is difficult to remove them even after drying. So the produce should be well dried soon after harvest.

Again, the produce should be dried well so as to make the nuts brittle; then only it should be stored. Otherwise, when it is packed in gunnies and stored in godowns, it undergoes fermentation. When partially dried kernels are exported, they undergo fermentation in the ship's hold and when they reach the destination, a higher percentage of acidity will be noticed. Thus the producer, hand in hand with the exporter, should see that the produce is well dried before export in order to obtain a higher value for Indian groundnuts. It is also desirable to set up a separate trade for lower grades of nuts.

*Vide Dept. of Agriculture, Leaflet No. 83.

DIFFERENT VARIETIES OF SEEDS



(b) *Seed.*

The varieties that are prevalent in this district, are the bunch and the spreading varieties. South Arcot grows only the spreading type, while in the adjoining districts the bunch variety is used.

The local Mauritius (A.H. 1) is the common variety grown in this district. Commercially, it is known as "Coromandel" or "Mozambique". This is the type that has widely spread in this presidency. It belongs to the spreading type. With small pods having one to two seeds, the plant takes 130 days to mature. Unlike the improved variety the "Coromandel" is small with a rose coloured testa.

In the adjoining districts of Chingleput and North Arcot the bunch variety commonly known as the "Gudiyattam Bunch" (A.H. 32) is cultivated. It is otherwise known as "peanuts or khandeish," with a shorter maturing period, running to 100 days. Like the local Mauritius, the pods are small with one to two seeds. The kernels are light rose and plump.

The other cultivated variety is "Small Japan" (A.H. 34) or commercially known as "Red Natal" or "Pollachi Red" or Lal Boria as it is called in Bombay. Belonging to the bunch type, it takes 105 days to mature. Though the pods are small, they are plumpy and contain two seeds of reddish colour. It is cultivated in the Pollachi taluk of the Coimbatore District.

Besides the cultivated varieties, new and improved varieties have been launched by the Agricultural Department after due trials in their farms. Among the improved varieties, A.H. 25 "Saloum" stands foremost. It has been taken from a mass selection of the West African variety. Its yield is 25% more than the local cultivated variety and is a good drought resistant. As such, it has taken hold in the southern districts of Madras Province and also the Ceded Districts. The pods of this type contain two and occasionally three seeds. The kernels are medium in size, rosy and somewhat plump. The duration of this plant's growth is 135 days.

Three selections from "Bassi" (A.H. 685, A.H. 678, A.H. 698) have been tested to find out the feasibility of their growth in this province. They have good resistance and stand well even severe drought. These selections are of the spreading varieties with occasional three seeded pods. The pods are very small with rounded tips unlike other types

which have beaks at one end. The kernels are small, rounded and rosy and not plumpy. Their yield is significantly higher than the local:—

A.H. 685	..	27·5% over the local.
A.H. 678	..	26·2% do. do.
A.H. 698	..	35·5% do. do.

Analysis of Various Varieties.

(Rain-fed crop)

Cultivated Variety			
	A.H. 1.	A.H. 32.	A.H. 34.
Average acre yield of pods. ..	1150lb.	1050lb.	800lb.
Shelling percentage ..	77	76	78
Oil content ..	49·8%	48·2%	49·5%
Number of kernels per lb. ..	1250	1400	1156
Free fatty acid ..	1·22%	0·35%	0·40%

Analysis of Various Varieties

(Rain-fed crop.)

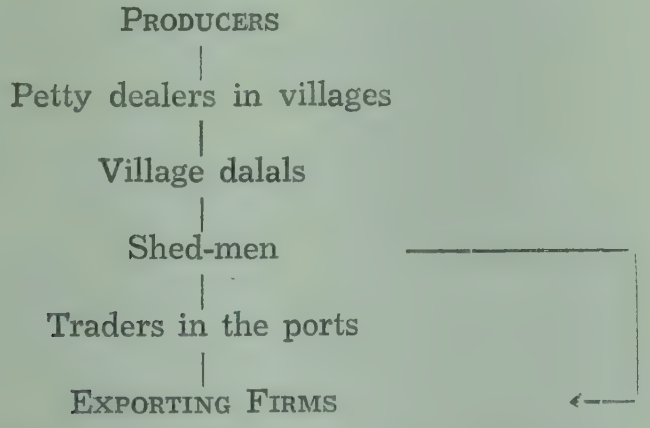
Improved Variety				
	A.H. 25	A.H. 685	A.H. 678	A.H. 698
Average acre yield of pods ..	1460lb.	1453	1578	1538
Shelling percentage	73	78·4	77	77·6
Oil content ..	50·4%	49·7	49·2%	49·8
Number of kernels per lb. ..	1025	1135	1111	1126
Free fatty acid ..	0·25%	1·39%	1·4%	3·36%

Section V

FROM THE CULTIVATOR TO THE EXPORTER

Groundnut is an important commercial crop of the South Arcot District and it occupies 25% of the total area harvested in each year. Since nearly 80% of the groundnut area is under rain-fed conditions, the vicissitudes of seasonal conditions make the crop a precarious one. The uncertainty of the crop very often becomes further aggravated by uncertain prices brought about by fluctuations in demand in the foreign countries which consume more than 70% of the local production. Like their brethern in the field, the groundnut producers in South Arcot are as a class poor. Largely on account of their need for money and partly on account of the pressure brought to bear on them by middlemen, the growers exhibit a great rush for sale in the harvest seasons. The produce changes hands many times before it is finally shipped to foreign countries from ports like Cuddalore and Pondicherry.

The chain of middle-men can be diagramatically represented as follows:—



As soon as the harvest is over, many of the cultivators who are in general poor and have no means to convey their produce to market centres, sell it in their own villages. The village dealers buy the produce at rock bottom prices. Being in need of money owing to the several disbursements he has to make, the cultivator disposes of the produce at any price that is quoted by the village dealers.

Besides the growers of the crop, the labourers in the villages too contribute their mite to the trade. As the labourers are paid in kind, they get their necessaries by selling the nuts to the village dealers, who waylay them on their way home and induce the workers to part with their produce for ready cash. The prices offered are, however, so low that there is no relationship between such retail prices and the market rates. Further, the purchases are made in volume; and the measures used are so faulty as to deceive the poor labourers. Tempted by a few coins shown to him in the evening when the urge of the toddy shop is great, the poor labourer falls an easy prey to the greedy village merchant.

The village dealers thus securing enough of the crop, bring it to the market centres. On their way are situated the sheds of the buying traders who are known by the name of shedmen. The shedmen employ men to direct sellers to their sheds. The purchase of both shelled and unshelled nuts is undertaken. After decortication they transport the produce to the market centres. To ensure the even flow of the crop to their sheds, they advance loans to the nearby villagers who raise the crop. When the harvest season is over, the shedmen go to the villages and quicken the sales of the crop in order to buy it at a low price.

The practices of some of the shedmen in weighing the produce may be noted here. But many of the practices described below were in vogue before the inception of the market committee. After its inauguration, radical changes have not taken place; but it has checked to a certain extent fraudulent weighment.

When the villager brings his cart-load of goods, the shedmen offer high prices which at times will be above the rate prevalent in the market. Tempted by such high prices, the villager consents to dispose of his produce and it is taken out for weighment. Innumerable are the men employed to unload the cart and for weighment. The work is done so quickly that the seller finds it difficult to watch the proceedings. Sometimes the seller is given a generous offer of a few annas for meals, tiffin and *pan* and sent out when weighment is done. As all the growers are not illiterate, some of them insist upon weighment in their presence. When they insist on this, they are duped in a different way. In order to please them, the buyer weighs some of the bags with the stamped weight, and after the first bag is weighed, the stamped weight is taken away and the bag previously weighed, serves the purpose of

THE PICKING PROCESS

weight for future weighment. When the other bags are weighed the buyer secretly places some big stone or weight by the side of the bag or even into it covering the top afterwards with groundnut. Thus for each weighment the seller is made to lose a great deal and in the end there is a great disparity between the weight calculated by the grower and the weight announced by the buyer. The seller is thus duped. Forced by circumstances, the grower sells the produce to the shedmen.

The shedmen decorticate the produce if it is unshelled and then send it to the market centres. Big traders who are contracting agents to the exporting firms, get into touch with the shedmen. The shedmen sell the produce to the traders as well as to the exporting firms for ready cash. The traders instead of being godown keepers are occasionally owners of oil presses as well as expellers. They deal in "katcha" as well as in "pucca" goods.

To keep up a continuous flow of produce, the traders advance loans to the village middlemen as well as to the growers of the produce. Being without sufficient capital, they borrow small amounts from sowcars and try to do a tremendous volume of business by selling to the exporters. To secure adequate capital, the local traders borrow sums at exhorbitant rates of interest and the burden is transferred ultimately to the ryot. The need to repay loans within very short periods and the desire to make large profits, induce heavy selling pressure allowing little time for proper cleaning, drying and grading of the produce. The quality of the produce is thus allowed to deteriorate in the process.

The advancement of loans by traders to the ryots has shown a downward trend in recent times owing to the passing of the Agricultural Debt Relief Act, and to the starting of the Market Committees.

As soon as the produce enters the go-down, it is weighed and spread out in the sun for drying. "Chittals" (labourers) are engaged to pick out the blacks from the spread out produce at a wage rate of three pies per Madras measure. (A bag of groundnut is approximately equivalent to 75 Madras measures). When the black ones are picked, the rest of the produce undergoes processing and is then filled in bags and sold to the exporting firms. The black kernels are in demand by the local oil mills who by extracting an inferior groundnut oil mix it up with castor oil to be utilized as lubricant. This oil of inferior quality is also used by temples for lighting purposes. Traders in the interior of the district bring the produce to the port and deliver it to the exporting firms, F.O.R.

GROUNDNUT

It is regrettable that till recently such a great producing centre of groundnut as South Arcot had no traders' association. The emergence of the market committee opened new vistas. The traders of Cuddalore Old Town evinced a great interest in starting an association of their own to further their trade. A few educated people took the initiative and their labour was rewarded. On 26th September, 1940, the association was registered under the Societies' Registration Act 1860. The objects of the association are:—

1. To further the interests of the traders of the commercial crop in all branches of their activites and get adequate facilities for the efficient prosecution of the trade.

2. To hold meetings once in a month, wherein experts should be invited to deliver lectures regarding the groundnut trade.

3. To help the needy and the poor out of the fund set apart for charitable purposes and

4. To open free reading rooms for the public.

The association has done useful work in suggesting a revision of the existing contract forms and also the creation of a standard grade of seed.

Leaving the traders, we now meet the exporting firms to whom the traders sell the groundnut. In Cuddalore as well as Pondicherry, there are branches of three exporting firms. The following table shows the total quantities of groundnut exported from Cuddalore and Pondicherry from 1935 to 1938.

Statement Showing the Shipping of Kernels at the Ports (in Tons)

Year.	Total
(*a*) *Cuddalore.*	
1935 ..	68,147
1936 ..	92,513
1937 ..	104,291
1938 ..	102,563
(*b*) *Pondicherry*	
1935 ..	49,877
1936 ..	63,658
1937 ..	94,476
1938 ..	53,590

The above table clearly shows the premier position occupied by Cuddalore in exporting groundnut to foreign countries.

The exporting firms buy only shelled nuts and buy them even if they are in the raw condition; but they quote prices for "pucca" quality only. The "Katcha" nuts were in great demand when Marseilles was importing Indian groundnut. With the stopping of exports to Marseilles the exporting firms rarely go in for "Katcha" produce. These firms never advance loans like the contracting traders; instead, they enter into contracts with only those having good will. Moreover, in the interior of the district, the exporting firms have their own agents who get the produce and send it to the port.

With the exporting firms, transactions of three classes are entered into. They are:—

(*a*) Forward contracts.

(*b*) Unfixed contracts.

(*c*) Spot transactions.

By forward contract is meant a particular system of contract entered into by a middleman with an exporting firm, for the supply of a particular number of bags, either machine-shelled or hand-beaten, before a particular date and at a fixed rate which is accepted by both the seller and the exporting firm. This kind of contract is adopted when the price is not steady and it is usually the middlemen that enter into forward contracts with the exporting firms.

Besides this fixed contract, there is another system of contract called the "unfixed contract." They are not so common as the fixed contract, for they are used only when prices are shooting up. In the unfixed contract system the price alone is not fixed while other items are specifically stated in the form. The seller brings, say, a 1000 bags on a day to the exporting firm where he gets 80% of the price of the produce at the day's prevailing rate. The price for the whole lot is not fixed. Hoping that the future price will be favourable to him, the seller waits. If the price is rising, the firms, however, keep quiet. But when they find a fall in price, the buying firms have a right to call on the seller to recoup the difference. On a particular day, if the price suddenly rises, the seller asks the firm to fix up that day's price for his produce, the buying firm may tell him, "I have instructions to buy to-day only a thousand bags; as four other sellers wish to have prices fixed to-day, I can accept

only a fifth of your quantity." The seller has to be satisfied. If the price goes down the next day, the seller stands to lose heavily. In Salem where this unfixed contract system prevailed, a time limit of 2 or 3 months was fixed. The seller was called on to fix the price at the end of the stipulated period. The clever sub-agent in many cases so manipulated prices as to keep them low and cause loss to the seller. Owing to the prevalence of this system, many families in South Arcot have met with utter ruin and poverty.

In the spot transaction, the produce, whether "Katcha" or "Pucca," when brought by shedmen or traders, is examined and weighed. The price is fixed after determining its quality. Such spot transactions are few in the case of the exporting firms and generally the contract system of buying is in vogue.

When the produce is brought, test weighment is done. Later, a refraction analysis is made for determining the quality, and the price is paid according to the quality. Soon after the refraction analysis, the produce is stored in a long go-down roofed usually with corrugated metal sheets. Since ventilation is necessary, enough space is left between the walls and the bags. The floor of the godown is spread with sand and on it a coir-mat is placed. As the produce is easily affected by change of weather, the groundnut crop is stored only in bags and not in bulk. If the storage is prolonged, the quality of the nuts deteriorates. After two months a kind of insect called the weevil affects the nuts, reducing them to powder. To combat effectively this insect, fumigation has been suggested; but this is very costly. Other methods of checking the insect are engaging the attention of the Entomologist.

On the shipping day a few bags are test weighed and sent on board. Before shipment the refraction analysis is again made in order to ascertain the quality of the produce shipped.

Before the war, the groundnut was exported to Continental ports like Antwerp, Rotterdam and Hamburg as well as to England. At present, owing to the closure of foreign markets, London alone is importing Indian groundnut.

For loading, unloading and other sundry work, labourers are recruited on a contract basis. From a survey it has been found that the following approximate wage rate prevails at Cuddalore.

TEST WEIGHMENT

OPEN AIR STACKING

Schedule of Wages

Unloading from wagons and stacking them in the go-down. (This includes test weight and sampling charge)	From Re. 1-0-0 to 0-12-0 per 100 bags (approximately).
Removing from the stack, pouring it out, drying, refilling the bags and stitching.	Rs. 3-4-0 per 100 men.
Picking out the blacks from the nuts	3 to 4 pies per Madras measure.
Sieving	0-8-0 per 100 bags.
Weighing before shipment	Re. 1-4-0 per 100 bags.

It has been observed that the middlemen take away the major portion of the growers' profit. Even in this war-time the grower loses heavily. This can be seen when we examine the course of prices from its progress from the village to the port. At present the only foreign market that consumes Indian groundnut is England; and the Food Ministry purchases it at £10 per ton, F.O.B. port. Deducting the incidental charges, one candy of 531 lbs. will give the ultimate seller Rs. 28. The following transactions clearly indicate the loss sustained by the grower.

"(About 520 Madras measures of unshelled kernel give about a candy of clean shelled nut.)

(1) The village dalal purchases from the growers for Rs. 10-8-0 per candy of 520 Madras measures.

(2) The town broker purchases for Rs. 12-8-0 from the village dalal and pays a cart hire of 0-8-0 giving No. 1 a profit of Re. 1 and allowing a rupee for driage.

(3) The town merchant purchases from the broker at Rs. 14-8-0 and allows a profit of Re. 1-8-0.

He decorticates the same and pays 0-12-0 as charges including weighing, etc., and sells the same to contracting merchants at about Rs. 16-8-0 and earns a profit of Re. 1-4-0.

(4) The contracting merchant sells to exporting firms at about Rs. 20 and incurs Railway and loading charges of about Rs. 2-4-0 and thus gets a profit Re. 1-4-0.

(5) The exporting firm is to pay for gunnies, godown charges, interest and loading charges which may amount to about Rs. 2, but still he may gain about Rs. 8.

In the above chain of transactions, the producer gets Rs. 10-8-0 and the ultimate purchaser pays Rs. 30. The expenses of marketing comes to Rs. 5-8-0 for all the items shown above and a profit of Rs. 14 is shared by various middlemen. 125 per cent of what the producer gets for his labour, seed and other charges, goes to middlemen even in this war-time when there is glut in the market with a price lower than the normal."*

To maximise the income of the grower and minimise the intrusion of the middlemen, co-operative marketing has been suggested. The inception of the marketing committee has to a great extent enabled the grower to get the maximum price for his produce. The poverty of the village growers proves an impediment in getting the just price for their produce. To efface the middlemen completely is not possible and their existence in the chain of marketing is not injurious if well regulated. Unless the marketing of the produce is done in co-operation with the Co-operative Department, the growers will find the same difficulty which faced them before the inauguration of the market committee. Credit facilities along with warehousing should be extended to the growers. The central problem in rural economy is the ware-housing question. As such, the market committee should not only see that the growers get a fair price but also extend credit and go-down facilities to them with the help of the Co-operative Department.

*Vide "Marketing of Groundnut," Madras Journal of Co-operation, March, 1941.

Section VI

CO-OPERATIVE MARKETING

In India the *laissez-faire* policy had a long lease of life even in marketing as it had in other spheres of economic activity. The present chaotic condition is the result of interaction of various socio-economic forces. In medieval days agriculture and cottage industries maintained an equilibrium which came to be upset at the emergence of modern industrialism. Though improved means of communication have brought access to the villages, their influence has not been great enough to make the village a well integrated system in the national economy. The village artisans who were enjoying patronage under the village organisation became bewildered at the onward march of industrialism. Agriculture came to be commercialized and the new methods in marketing practice went counter to traditional practices. Thus with no change in his mental or moral sphere, the farmer has come into contact with the world market. This condition has been aptly described by the Agricultural Commission as follows :—" His interests have in the main been left to the free play of economic forces, and they have suffered in the process. For he is an infinitely small unit as compared with distributors and consumers of his produce who, in their respective fields, become every year more highly organized and more strongly consolidated." Thus it is observed that with no commensurate change, the farmer drifts from the medieval system of economy to the modern. Therefore it is of immediate necessity that we should evolve a system out of the nebulous rural marketing of old.

Since agriculture dominates Indian economic life, the importance of a rational system of marketing cannot be over-estimated. The farmer gets such a low income that it hardly suffices the daily necessaries of his life. As such he has to fall a prey to indebtedness.

To relieve him from indebtedness and enable him to get a fair price for his produce, a perfect system of marketing is invaluable. Let us examine the implications of rural marketing. Firstly, difficulties in marketing stand in the way of production, for without adequate consumption continued production will jeopardise the economic equilibrium. Secondly, marketing

and production should be so related that the maximum price should reach the hands of the producer. Unless the producer gets a fair price, there is no guarantee that he will produce the same goods. Thirdly, the absence of such correlation will restrict consumption. The more organized the market, the lower will be the price of the products and accordingly the greater the advantage to the consumers from a given money income. Fourthly, the present system of marketing involves a colossal waste to the country. Improved marketing will increase the total wealth of the country. Fifthly, the development of industries needs a regular supply of raw materials. If raw materials are not supplied regularly, industrial advancement will be hampered. Lastly, we find a disparity between the price the producer gets for his product and the prevailing rate in the market. This is the crux of the problem. The price the producer gets is low because the cost of services involved in the process of distribution is disproportionately high. To make this expenditure reasonable and to enable the primary producer to get the maximum share of the price which the ultimate consumer pays, is the main problem.

As a proper remedy presupposes careful diagonosis, a study of the chaotic condition of rural marketing is essential to any scheme of improvement.

The village producer suffers in marketing owing to the dislocation caused by the impact of modern industrialism on rural economy. His difficulties can be traced to three inter-connected factors. "The producer has to sell his produce at an unfavourable place, and at an unfavourable time for unfavourable terms of price." Place, time and terms are the three prime factors that contribute to the ills of the present marketing system.

The village producer generally disposes of a good part of his produce in his own village. He sells to the sowcar, the bania, the prosperous landlords or the agents of the wholesale merchants. Regarding linseed, for instance, it has been estimated that the All-India average of the percentage taken to the market for sale by cultivators themselves, is only 20% as against 40% of the produce sold by the landlords. The reason for such a procedure is his indebtedness. The cultivator usually mortgages his crop for the loan he has taken for raising the crop. As soon as the harvesting is over, the sale of the produce is made in the field itself. In cases where such pledges are not made, the pres-

sure brought to bear upon the producer by the creditor sowcar is such that he is compelled to dispose of his produce on the threshing floor.

The second important factor which is responsible for village sales, is the lack of communication with the nearest market. Many of the villages lie far away from trunk roads and feeder roads are few. Even if there are feeder roads, they are so ill-kept that it will be risky to use them for transport. At times the producer has no carts to carry his produce to the market. In some places, soon after the harvest of one crop is over, the sowing operations for another crop are begun and the cultivator can ill spare the time to go to the market.

Even when a producer reaches the market after overcoming these disabilities before the produce is actually sold, he has to face, as the Report on the Marketing of Wheat observes, a host of unwelcome agents. "the Kacha arhatya, the Dalal, the Charhava who fills the scale pan, the the Arhatya's clerk, the Chaukidar, the sweeper and a horde of beggars of every description."

In these markets arbitrary deductions are made for religious and charitable purposes. The agents of the buyers draw out large quantities as sample. The sales are conducted by the agents of the buyer and the seller through code words which are not understood by the cultivator. Very often the actual settlement takes place outside the market, and if disputes arise over it, the buyer often wins.

The element of time is an essential factor as regards perishables, like vegetables and fresh fruits. To market them successfully, rapid communication is essential. Since the producers sell their produce as soon as the harvest is over, a glut in the market occurs. The prices fall, affecting the producer's money income. If the distribution of the produce is done judiciously, a fair price can be had for the producer. This the producer cannot do as long as he is weighed down by debts. As such, financial aid for the producer is an essential factor. One of the ways of improving the marketing facilities of the producer is by an organised system of co-operative marketing.

We have already noted that the producers prefer to dispose of their produce in the village rather than take it to the market owing to the existence of the innumerable middlemen. To eliminate the middlemen as far as possible and to secure a reasonable price for the produce, the co-operative method of marketing has been

suggested. Mr. V. L. Mehta in submitting his memorandum to the Royal Commission on Agriculture has observed: "In the sphere of agricultural marketing it has been found that arbitrary imposts have occasionally been abolished, proper stocking of goods for better prices facilitated, and, especially in respect of the sale of cotton, the advantages of sale in wholesale markets and of proper prices for imported varieties secured. Co-operative supply agencies have conferred the benefits of proper weighments, purity of goods, and wholesale prices to those who deal with them." Co-operative marketing has developed business habits among agriculturists.

A co-operative sale society can easily eliminate the intermediaries and can have direct dealings with the mofussil purchaser. Co-operation offers one of the best means through which the producer can get the full market price for his produce. Efficient Consumers' Societies will also effectively eradicate middlemen.

Only in the last decade, the Agricultural and Co-operative departments came to realise that through their co-ordinated effort rural marketing can be effectively organized so as to bring prosperity to rural India. Co-operative marketing has now made some headway in India. Burma led the way by inaugurating paddy sale societies, and Bombay, the Central Provinces and the United Provinces have followed her example.

Though there was a remarkable advancement as regards the sale of cotton in Bombay, the movement was not without difficulties. It had to face mismanagement, absence of hold on members and inadequate finance. So the Agricultural Commission put forth the strong plea for making it a powerful organisation to fight against vested interests. The Central Banking Enquiry Committee recommended that as far as finance was concerned the provincial governments should advance liberally to the co-operative banks at concessional rates of interest for the development of co-operative sale societies.

Besides cotton, other products like groundnut, gur, tobacco, chilly and arecanuts came to be dealt with by these sale societies. In the Madras Presidency, soon after the war of 1914-18 such sale societies came into existence. Some of them not only sold the produce on behalf of their members but also gave cultivation loans. The more important societies are "The Tirupur Cotton Sale Society," "The Koilpatti Sale

Society," "The Central Sale Society" at Cuddalore and "The Tiruvannamalai Loan and Sale Society."

In this study of the marketing of groundnut, an account of the history of the *Central Sale Society at Cuddalore* and its activities may be of interest. To enable the ryot to get a fair price and to make marketing efficient, the Central Sale Society was registered on 22nd June, 1935. It began to function on the 11th October, 1935. The Society had under its jurisdiction the South Arcot District and the Udayarpalayam Taluk in the Trichy District. The membership of the Society is open to individuals as well as to Societies. With a paid up share capital of Rs. 4,834-5-0, the Society was allowed to borrow up to a maximum of five times the paid up share capital plus the reserve. The Society was managed by seven members elected by a general body. The members of the board were elected yearly.

The object of the Society was, firstly to advance loans on the pledge of produce; and in this work the Society was partially successful. Secondly, it had to arrange for the sale of the produce of members to the best advantage. This privilege was extended even to non-members. Thirdly, it was to act as the agent of the members in the matter of receiving for safe-custody in its godowns or elsewhere the produce pledged in the co-operative societies. This object was never put into practice.

In 1931, it was found that the marketing of groundnut was slowly declining; and endeavours were made to resuscitate the market. The Registrar of Co-operative Societies, assisted by the Director of Agriculture and the Assistant Director of Agriculture had an extensive tour of South Arcot to explore fresh avenues in order to prop up the market. As a result of this tour, the Central Sale Society was asked to open warehouses at Cuddalore Old Town, Tirukoilur and Vriddhachalam. Agricultural demonstrators were put in charge of the warehouses at Tirukoilur and Cuddalore Old Town while the Vriddhachalam warehouse came under the supervision of a Co-operative inspector. In January, 1938, at Villupuram, a warehouse which was already run by the Valavanur Sale Society was taken up by the Central Sale Society and a Supervisor was appointed to look after the business.*

* See Appendix: Table VIII.

GROUNDNUT

The Central Society engaged no middlemen. The ryots used to bring their produce direct to the Society. As soon as the groundnut laden cart arrived, information was sent to the members who were the usual buyers. The buyers sent their agents to inspect the produce and fix up the price; and the bid was done through secret ballot. The maximum price was availed of by the ryot.

As soon as the sale was effected, the purchase money was paid to the ryot less commission charged for handling. If a loan had been advanced it was deducted from the sale proceeds. Sometimes there might be delays of a few hours or a few days in obtaining the sale money causing some difficulties for the ryot; and the co-operative warehouses had no ready cash to help him. In Cuddalore the cash credit facility was allowed by the Central Co-operative Bank; but the warehouse officer could not take advantage of this facility. However, the purchasers here often were known to pay promptly.

In the Co-operative warehouses, besides the commission on sales neither go-down rent nor sundry charges are levied. The cooly charges are borne by the sellers. In the case of groundnuts there is no insurance charge levied as is invariably done in the case of cotton, but a commission of four to six annas per Candy is charged on the sales.

The weights used by these sale societies are standard weights and a candy is equivalent to 531 lbs. The produce is not graded or standardized before selling but it is sold outright.

In order to help the ryots to obtain a fair price, godown facilities are given; but the storage facility is not adequate for stocking large quantities.

The Co-operative Department launched a controlled credit system so as to aid cultivation which the Government also support through Takkavi loans. The ryots, however, usually spend beyond their means, and continue to be in debt. Any aid co-operative Societies give the ryots would be useful only if the Societies can help in its proper utilization.

To make co-operative marketing popular with the ryots and to induce them to sell their produce through the sale societies, the agricultural demonstrators along with a special non-credit inspector made extensive propaganda in the district. But soon they were withdrawn

as a measure of retrenchment. With the bringing into force of the amended Madras Commercial Produce Marketing Act in South Arcot and the opening of market yards at Villupuram, Vriddhachalam, Tirukoilur and Cuddalore Old Town, the usefulness of the Sale Society slowly and steadily began to diminish, with the result that it is now under liquidation.

To fetch a fair price and eradicate the existence of middlemen it has been observed by well-known co-operators that the sale society should buy the produce outright and pay sufficient advance to the ryots, and adjust the same as soon as the produce is sold at the port.

Section VII

REGULATED MARKETS IN INDIA

Regulated markets in India were in existence as early as 1897 when the Berar Cotton and Grain Markets Law was passed. This law was promulgated by the Government of India for the "Hyderabad Assigned Districts" as Berar was then officially called. Moreover, the Municipal Act of 1903 of the Central Provinces empowered the municipalities to inspect and regulate the markets. Yet their progress was slow. When the Agricultural Commission investigated about marketing, there were regulated markets only in C. P. and Bombay. After a thorough investigation the Commission arrived at certain conclusions which should be studied before we proceed further.

As the Berar Law as well as the Bombay Act confined themselves to cotton alone, the Commission saw no justification to confine the Acts to cotton only but recommended that products other than cotton should also come into the orbit of the law.

Secondly, the municipalities and district boards should be kept out of the management of these markets. If a regulated market is under the jurisdiction of the local boards, the influence of vested interests would stand in the way of fulfilling the higher objects for which the market has been created. They will look only for revenue and erect market yards within the municipal limits without considering the difficulties of communication. As such, separate provincial legislation should be passed for establishing regulated markets.

Instead of leaving the initiative in the hands of local bodies, the provincial governments should launch a policy of starting markets and meet the initial costs.

Wherever there are markets controlled by the local boards, they should automatically cease to function when the regulated markets come into existence. To make up the loss sustained by local boards by such a closure of markets, they should be compensated by an annual contribution to be made by the regulated markets.

Regarding the constitution of the market committee, it has been said, that half of its members should be from the rank of the cultivators; and where necessary, to protect the interests of the growers, a member from the agricultural department could be included. Licensed brokers shall be prohibited to stand for election from the growers' constituency. The committee should be empowered to elect its own Chairman and Vice-Chairman. The co-operative society in the area should also have its representative on the board.

The market committee should see that its members are well informed about the market condition daily. Besides, as the Commission suggested, brokers should be strongly discouraged from acting both for the buyers and sellers, as in such cases, the broker had the "natural predilection to favour the buyer."

Lastly, the Agricultural Commission advocated storage accommodation and desired to utilize such markets for purposes of propaganda in favour of agricultural improvements and thrift.

The foregoing recommendations of the Commission had their desired effect. In the wake of such recommendations new acts came to be promulgated in various provinces. A brief survey of the regulated markets which came into existence in the last years of the third decade of this century is given below.

Central Provinces

As already indicated, markets in C. P. fall under two categories, *viz.*, regulated markets and markets controlled by local boards. Under the C. P. Municipal Act several markets are being run, of which Raipur, Drug and Nagpur are noteworthy. The market at Raipur has been from its inception controlled by the Municipality through its executive committee. No storage rent is charged for the first three days after which one anna per bag is levied. The chief commodity that is dealt in the market is rice. The market superintendent is the *de facto* executive head of the market. Disputes arising in the market are settled by him. But when no settlement is arrived at, a separate tribunal is created. Even when the tribunal fails, the executive committee settles the case.

All the operations in the market are either registered or licensed. The Dalals, measurers and coolies get registered and charges are levied

for handling. No octroi is charged for the sale effected in the market yard.

The Dalal serves as the intermediary in settling the transactions between the buyer and seller. All these transactions are entered in his book and finally scrutinized by the Market Superintendent to ascertain that the seller and the buyer are agreed about the price at which the produce is sold. "As soon as the agreement is reached the Dalal deposits Rs. 5|- per cart as earnest money on behalf of the buyer."

In the Drug market, methods of transacting business and of settling disputes differ from the Raipur market. As soon as the seller arrives at the market, he gets a receipt which he sticks into the spread-out produce. The buyers arrive on the scene and fix up the price. The name of the highest bidder is entered in the receipt book before the market superintendent. Then the auction takes place and the final settlement is arrived at. The name of the buyer is entered in the book and the earnest money is deposited on the spot. Disputes arising out of it are settled by a committee deputed by the municipality and if it fails, the President of the Municipality hears the case. Ordinarily disputes are settled within a day.

The markets operating under the C. P. Cotton Markets Act of 1932 deal only in cotton. The markets at Amraoti and Akola stand out in bold relief as regulated markets. The Amraoti market was started as early as 1872 under the control of the Municipal Board. Though it was conducted well, it did not form a well regulated market until the passage of the Act of 1897. Soon a committee was formed to look after the control of the market. Since the new market superseded the local board market, a financial agreement was arrived at by which the new market consented to pay the surplus revenue to the local body. The committee had five members, two of which were nominated by the Municipal board while the rest were the representatives of the traders in the locality. In 1932 when the Act of 1897 was amended the committee was expanded as follows. Out of the eleven members, four were elected by local traders, four by the cotton growers of the taluk, one was nominated by the Municipality and one was the representative of the local co-operative societies. The committee is empowered to elect its own chairman. Election of the members is to be done once in three years. The management and control of the market are vested with the market committee which in its turn is placed under the supervision and control of the

district officers. The Commissioner of the division is the final administrative authority.

The market yard has a good library with a radio for receiving news. The market committee which is solely responsible for the control of the market, has four sub-committees which respectively deal with disputes, audit, public works and the checking of scales and weights. There is a permanent staff at the head of which is the superintendent who supervises the work in the market yard.

"Buyers, dalals, and weighmen are all registered and licensed by the committee and have to pay an annual fee of Rs. 100|-, Rs. 60|- and Rs. 5|- respectively. The market charges are clearly defined and include Re. 1|- per cart for dalal, 0-1-6 ps. per cart for weighing and an anna per cart as market cess. In addition to these, the buyer pays 0–2–6 per cart as handling charges. The dalals usually pay 0–1–0 per cart for the local Dharmasala fund. Though the carts have free entrance to the market yard, a terminal tax of 0-15-0 per bale of lint is levied by the Municipality on all outward traffic either by rail or road."

Even though the amended act is a definite improvement on the former one, in the case of disputes it lacks rigorous enforcement. Usually the final settlement takes place outside the market yard when deductions are made by the buyer. The seller has no other recourse than to abide by it. Though the market committee has full legal powers to put an end to such transactions, it confines itself to collecting the cess due to it.

Like the Amraoti market, the Akola market was also re-organised in 1932. Its organisation and management are similar to that of Amraoti. One cardinal feature in it is that it prohibits brokers to act both for seller and buyer.

In 1935, an act concerning all agricultural produce was passed. It was amended in 1937. According to this, even the marketing of all agricultural produce except cotton comes under its purview. The market committee is constituted as follows. It has ten members of which five are elected by the agriculturists, one is the servant of the Crown of not less than the rank of a Naib Tahsildar, one nominated by the District Board, one by the Municipality and the rest are from the ranks of the traders. The management and control are similar to those of the cotton markets.

GROUNDNUT

Bombay

In Bombay, an act was passed in 1927, which was subsequently amended in 1933 ; and its purpose was to regulate the sale in the cotton markets. According to this act, a market yard was opened at Dhulia in 1930. The market committee which is responsible for the control of the market has fourteen members including seven representatives of the growers, four of the local traders and one each of the Agricultural Department, the District Board and the Municipality. As in C.P., the market committee is controlled and supervised by the district revenue officers. Disputes arising out of the transaction are finally settled by a sub-committee, if the superintendent fails to arrive at a settlement in the first instance.

Buyers, dalals and weighmen are licence holders paying an annual fee of Rs. 10|-, Rs. 30|- and Rs. 5|- respectively. After the organisation of the regulated markets the market charges have decreased.

The prevalent market rates in Bombay, America and Liverpool are received by telegrams and are notified in the market yard. Though settling prices under cover is even now in practice, malpractice in scales and weights has been efficiently put an end to.

The Bailhongal market, though similar in constitution to the Dhulia market, differs in certain respects. Firstly, the produce is put into open auction and the final weighment and settlement of prices are done in the market yard. This effectively minimises disputes. No trader is allowed to transact without a licence within a radius of ten miles from the town of Bailhongal.

Madras

The object of the Madras Commercial Crops Market Act of 1933 with its amendment in 1939, is to secure the better regulation of buying and selling of commercial crops (cotton, groundnut and tobacco) and to establish markets for this purpose in the presidency. The act is administered through the Collector of the district. At first the notified area was Tiruppur, and later, South Arcot came under its purview.

Let us first briefly relate its working at Tiruppur and study in detail its operation in the South Arcot District in the next section. The Tiruppur market was first owned by the Municipality. In 1936, it came

under the regulated markets list with twelve members of which five are elected by the cotton growers, four elected by the licencees functioning in the market, one is nominated by the local board and the rest are the nominees of the Crown. The life of the committee is three years. The market is a decentralized unit, but the Government want to make it a centralized one in course of time.

The Market Committee elects its own chairman and carries on its functions through five sub-committees. As regards the staff, a novel departure has been made in appointing as secretary a senior Agricultural Demonstrator, in order to stabilize the market and ensure its efficiency in its initial stages.

The secretary of the committee receives information daily regarding the prevailing rates in Bombay, Liverpool, and New York, and notifies it duly. Since the market has no yard of its own, carts are directed to the ginneries where licensed weighmen weigh the produce.

The charges are as follows:—

(a) Brokerage 0-6-0 per candy of 784 lbs. of Kapas or 0-12-0 per candy of lint.

(b) Market cess of 0-4-0 per candy of 784 lbs. of lint and 0-3-0 per candy of Kapas.

If the seller fails to deliver the produce at the premises of the buyer, the seller has to pay an additional charge of 0-6-0 per candy.

Thus a market fund is created from the licence fees, market fees and other miscellaneous receipts. The total income during the two years 1936 and 1937 amounted roughly to Rs. 25,000; and nearly half of this was expended.

Hyderabad

Unlike Bombay and Madras, Hyderabad deals in all agricultural commodities. This is a definite improvement, for the dealers can make up the loss sustained in the controlled commodity by widening their profit margin on commodities which are not controlled. A marketing section has been formed and the marketing officer is responsible for the administration of the Act. Already ten markets are operating under this Act.

The Raichur market which was constituted in 1339 Fasli, was first confined to the main bazar with a market cess of 0-1-0 per cart. Later the limits of the market area were extended to ten miles around the collectorate of Raichur. Though there was bitter opposition in the initial stages, later it came to stay through the patient and tactful propaganda of the Collector. The market is managed by a committee of twelve members, six of them being representatives of the growers, four from the rank of the traders, one from the local Municipal Board and another nominated by the Government. The board has to be reconstituted once in two years. To compensate the Municipality for the loss sustained by it by the creation of the regulated market, half the revenue is paid to the Municipality.

Though a sub-committee is in charge of the administration of the market, in reality it is the superintendent who looks after it. Licence fees are levied on the brokers, weighmen and measurers. Market charges payable by the seller and the buyer are specified. A special committee has been appointed to collect funds for charitable institutions. The terminal tax levied is 0-4-0 per cart entering the municipal area.

The *Warangal* market closely resembles the Raichur market, and in the first instance, even this market had to face opposition; but gradually it was overcome by the tactful work of the Collector.

Punjab

The Punjab Agricultural Produce Markets Act was passed in 1939. The Act includes all agricultural produce, *viz.*, cotton, wheat, barley, rice, oil-seeds, maize, gram, sugarcane (gur and shakkar). The Act regards those who actually raise the crop as growers and excludes from its range brokers or dealers who dispose of the produce. Licence fees have been fixed with a maximum limit at Rs. 10.

The market has to be controlled by a market committee of not more than sixteen members, two of whom are to be nominated by the Government and the rest to represent the growers and the licence holders in the proportion of two to one. The weighmen, dalals and measurers should take out licences. The life of the committee is three years.

North-Western Frontier Province

The Agricultural Produce Markets Act was passed in 1939 and it received the assent of the Governor-General on the 16th August of the

same year. Unlike other provinces it includes all produce of agriculture or horticulture, animals and their hides, skins and wool and any article of food or drink wholly or partially manufactured from agricultural produce. Here, the dealer and the broker, even though they may raise the produce, are excluded from the list of the growers of agricultural produce.

For every notified area, a market committee has been constituted with not less than ten and not more than sixteen members. Half the number are elected by the growers while the Government, the District Board and the Municipality each send one member. The rest have to be elected by the traders of the notified area.

The act makes every committee a corporate body with legal existence. Moreover, it prohibits the brokers from acting in any transaction on behalf of both the buyer and seller.

The market committees are allowed to have a fund created from the collection of licence fees, market cess and other miscellaneous items and permitted to defray their expenses from that corpus.

No trade allowance except the specified charges are allowed to be collected in the market, and private markets are prohibited to transact business in the notified area.

The above acts owe their existence to the deliberations conducted in 1938 at a Conference in Delhi of the Central Marketing Staff and of the senior marketing officers in Indian provinces and states. In this conference a model bill was drafted for the regulation of markets. Following the model of this bill, Punjab, North-Western Frontier Province, Bengal, Mysore and Travancore passed Acts suited to local conditions. The Bombay Act was amended to include crops other than cotton. The emergence of the regulated market is a new augury for the betterment of the masses and the rural prosperity of the land.

SECTION VIII

MADRAS COMMERCIAL PRODUCE MARKET ACT—ITS WORKING IN SOUTH ARCOT

The South Arcot District was declared a notified area under Section 4 (1) of the Madras Commercial Markets Act 1933, from 1st April, 1939. Accordingly, a Market Committee was constituted under the caption "South Arcot Groundnut Market Committee." The members of the first committee were nominated by the Government. As the Secretary of the Committee, a subordinate of the Agricultural Department was drafted in after a few weeks training in the Tirupur Cotton Market Committee. Six superintendents of the market yards were also recruited from the Agricultural Department.

As soon as the Committee was formed, the framing of the bye-laws engaged their attention. At first the bye-laws were modelled after the Tiruppur Cotton Market Committee bye-laws. But later they were recast in the light of experience. The object of the bye-laws is to regulate the business in groundnut and conditions of trading.

The Market Committee has as its head the Chairman who convenes meetings which are held in the office of the committee once in two months. On the requisition of half of the members of the committee, a meeting can be convened. When urgent matters await the consideration of the committee, the papers relating to them are circulated among the members for perusal and opinion. The quorum in the case of the committee meeting is four.

The Market Committee consists of two sub-committees. They are:—

(a) Executive sub-committee,

(b) The Disputes sub-committee.

The Secretary of the Market Committee is the secretary of both the committees; and the chief executive officer convenes the meetings.

The Executive Committee is composed of four members, and these are:

(a) The Chairman,

(b) One elected from the ranks of the traders,

(c) One of the representatives of the growers and

(d) One nominated by the Committee.

These members are from among the members of the Market Committee. The Chairman of the Market Committee *ipso facto* becomes the chairman of the sub-committee. The quorum for each meeting is three.

The functions of the committee are to prepare the annual budget and suggest constructive programmes for the furtherance of the committee. It is their duty to see that the collection and dissemination of market intelligence are done efficiently. Any member of the committee can hear complaints regarding marketing practices and can bring the fact to the notice of the committee.

This committee met four times in 1939-40 and prescribed the forms as per the bye-laws and revised the bye-laws in the wake of experience.

As regards the Disputes sub-committee, it is composed of four members who are drafted in as follows:—

(1) One of the nominated members of the committee who acts as the chairman of the committee,

(2) One of the persons from the growers of the commercial crops on the committee,

(3) One of the members representing the traders of the commercial crop in the committee and

(4) One of the representives of the local body not being the chairman of the committee. If there is no other member from the local body, some other member of the committee is appointed.

The committee is intended to settle disputes, and the sub-committee appoints in each market yard a panel of not less than 12 but not more than 24 persons. Every person included is expected to have a knowledge of the trade.

When a dispute arises, the parties report it to the Secretary with the prescribed fee. Each party elects one arbitrator from the panel constituted by the sub-committee. When the arbitrators fail to arrive at a settlement, an umpire is appointed who is also chosen from the same

panel. As a final appellate tribunal there is the Disputes sub-committee whose decision is final. Every session of the sub-committee is presided over by the chairman and in his absence by a member chosen from the members of the sub-committee. At least three members are required for the quorum. The sub-committee records the disputes that come before them. Though this sub-committee was ushered in, as there were no disputes in 1939-40, it had no occasion to meet.

To start with, the South Arcot Groundnut Market Committee got a loan amounting to Rs. 7,700 from the local government. "The total revenues of the committee during the year 1939-40 amounted to Rs. 71,294-7-6 of which Rs. 40,016-6-10 has been spent and a sum of Rs. 3,105 has been deposited with the Government. The committee received also a sum of Rs. 1,174 as deposits chiefly from weighmen for the badges supplied to them; and out of the deposits a sum of Rs. 7 has been refunded. The net assets of the Committee on 31-3-'40 are estimated as Rs. 38,245-0-8."*

The most important feature of the committee is the provision of central places for marketing. With the sanction of the Government five market yards were opened in important centres of the District. The five market yards are as follows:—

Name.	*Date of opening.*
Tindivanam ..	12–12—1939
Vriddhachalam ..	25—1—1940
Tirukoilur ..	29—1—1940
Ulundurpet ..	9—2—1940
Cuddalore ..	3—3—1940

They began to work at the fag end of the season and as such the transactions were not on a large scale. As regards the transaction from the date of their inception to the last day of March 1940, a table is appended herewith.**

*Vide South Arcot Groundnut Market Committee Report for 1939-40, pp. 4-5.
** Vide South Arcot Groundnut Market Committee Report, 1939-40, p. 12.

Market Centres.	*Estimated arrivals in the market centre.* (Tons)	*Arrivals in the market yard during the corresponding period.* (Tons)	*Percentage of the Quantity in column 2.*
	(1)	(2)	(3)
Tindivanam ..	4505·8	208·6	4·5
Vriddachalam ..	776·6	67·4	9·0
Tirukoilur ..	1152·1	57·7	5·1
Ulundurpet ..	506·4	142·2	28·0
Cuddalore ..	265·9	64·3	24·0

Unlike other market yards, in Ulundurpet a major portion of the produce is sold through the market yard; for the yard is within the easy reach of the growers. In other centres, as the season is over only petty traders bring their produce for disposal. Moreover, the carts have to pass the buying sheds of the traders and hence get intercepted on the way. In order to carry out marketing efficiently as in the Dhulia market, the committee has proposed to expand the space in the yard and prohibit buying and selling outside the market yard.

As these market yards are not always within the reach of the traders, provision has been made in the Act to have licenced premises to carry out transactions. The fees per year for the licence are on the scale noted below:—

*Class (*i*)	For each single premises ..	Rs. 10
(*ii*)	For every additional premises ..	Rs. 5
(*iii*)	For each shop in villages where groundnut is bought and sold in retail as a side line to other business ..	Rs. 2

*Vide South Arcot Groundnut Market Committee Bye-law 11 (a).

The maximum fee leviable has been fixed at Rs. 25. For amendments in the licence an additional fee of Rs. 5 is charged while the owner of the country chekku is exempted altogether from the levy.

The licence form is always displayed well at a prominent place in the licencees' premises. Each copy of it costs one anna and if subsequent copies are required, the licencee has to pay four annas. It contains the following details:

(a) The name of the licencee,

(b) Licence number,

(c) The maximum fees payable according to the bye-laws to brokers, commission agents, etc., and

(d) Such other information as may be directed by the chairman from time to time.

During the year 1939-'40, 430 licences were issued for 712 premises. Many were the small premises without licence that carried on trade in remote villages beyond the reach of the Committee's officials. Though Rs. 25 was first fixed for a licence, it came to be reduced owing to the poverty of the traders.

The licencees engage assistants or agents to look after their work. They are required to have in possession authorization cards from the licencees with the endorsement of the committee. The weights and scales are scrutinized well and only certified weights are allowed to be used in the premises. When processing is carried on in these premises any method which will adversely affect the quality is prohibited. The licencees keep accounts which are submitted to the committee for scrutiny.

With the enforcement of the Act, trading in groundnut, whether buying or selling or both, requires registration in the market committee. By such registration the committee keeps in touch with every trader and closely watches his activities. For the levy of fees the traders are classified as follows:—

A Class—Traders with one or more partners and those registering as corporate bodies.

B Class—Traders registered as individuals employing four or more authorized agents or assistants.

C Class—Traders registered as individuals employing less than four authorized agents or assistants.

D Class—Individuals who do not employ any authorized assistants or agents and village shop keepers licensed under class (iii) of bye-law 11.

Since there are different classes of traders, the fees for registration vary. They are as shown below:—

		Fees	
		Half-year Rs.	Year Rs.
1. Buyer and seller—Class A	..	12½	24
„ B	..	9	16
„ C	..	6	10
„ D	..	1	2
2. Buyer alone —Class A	..	8	15
„ B	..	6	10
„ C	..	4	6
3. Seller alone —Class A	..	8	15
„ B	..	6	10
„ C	..	4	6*

People who buy groundnuts either raw or processed are exempted from registering if the quantity bought does not exceed 7,000 lbs. in the course of the year. People who buy groundnut for seeds are also exempted from the purview of the bye-law.

The registered traders have to keep daily accounts a statement of which they should submit before 6 p.m. of the next day. Traders whose premises are beyond a five miles radius of the market yard are asked to submit only weekly returns. When the produce is examined by the buyers a rate is fixed up which is recorded in the prescribed form kept by the committee. When once the rate is fixed, it is binding on both the parties. As soon as the price is fixed, the weighment is done. If by some unavoidable delay the weighment is not done on the day when the transaction is carried, it is postponed to the next day while the original rate prevails. Even if the transaction is made through the agents of the parties, the

*Vide *Ibid*, Bye-law, 13.

rate once fixed prevails throughout till the transaction is over. Weighment is not done after sun-set except with the written consent of the seller.

The traders usually have agents to transact business on their behalf. They carry along with them authorization cards issued by their masters and countersigned by the Secretary of the committee. Whenever the trader registers himself, he submits a list of agents or assistants under him. For the subsequent inclusion of names in the list, the committee levies a fee of annas four. The agent of the seller is not allowed to purchase the produce in his own name or in partnership with some others except with the written consent of the seller in the prescribed form. The commission on this transaction is fixed at 0-1-6 pies per bag in the case of kernels and 0-3-0 in the case of pods.

By the introduction of such rules, the seller is safeguarded. Before the advent of the committee, the buyer used to deduct as commission 1½ annas to 4 annas per candy of groundnut bought. Besides, a deduction as weighment and handling charges varying from 1 anna to two annas was made. Brokers and buyers used to take free samples. Moreover, allowances for dirt were made. The price fixed was not always paid. Irregularities in weighing were not uncommon.

With the enforcement of the rules, the legitimate commission alone is allowed and that too has been reduced to nearly 50 per cent. Deduction regarding handling and weighment charges, has been put an end to. Now the samples are returned to the seller, and once the price is fixed. it never changes. Allowances for dirt have been now discontinued. Trade allowance of one pie per bag, which used to be collected, has been prohibited. Weighment irregularities have been stopped by a careful scrutiny of the weights and scale.

During the year 1939-40, the number of traders registered are as follows:—

Buyers and sellers—Whole year	..	153
Buyers and sellers—Short periods	..	764
Buyers alone	..	100
Sellers alone	..	44
		1061*

*Vide South Arcot Groundnut Market Committee Report, 1939-40, p. 16

However, in villages petty traders to evade registration pass off as growers.

The brokers, whether they deal in pods or kernels, have to pay as licence fee Rs. 10 per year and Rs. 6 per half year. Their duties are that they have to enter in a bound note book provided by the committee, "the weights of pods or kernels from the seller's copy of the entries in the weighmen's chitta together with the rate and amount of money paid for the groundnut." They have to furnish weekly returns on each Monday in the prescribed form recording the quantity of groundnut purchased by each buyer and the name of the weighman. The maximum brokerage allowed is six pies per bag of kernels or two pies per bag of pods. On receipt of brokerage, they issue a receipt for the amount received. The South Arcot District has very few brokers. In 1939-40 only 18 got licensed.

The rules framed under the Act make the weighman independent of both the buyer and the seller. Weighment is allowed to take place in the licensed premises if it has to be performed outside the market yard. Only licensed weighmen who wear the distinguishing badge are allowed to weigh. They pay a licence fee of Rs. 6 per year. For shorter periods too the licence is issued. For example the weighman can get licence for a week on payment of eight annas or for one month if he pays a rupee. Free licences are issued by the committee for those who work in the market yards under the supervision of the committee and for weighmen employed in the Government depots of the Agricultural Department.

The weighman correctly weighs the produce brought to him and enters it in the register supplied to him by the committee for a nominal price fixed from time to time. His entry is endorsed by the buyer; and a copy of the entry signed by the buyer is also given to the seller. Weighmen employed by the registered trader demand no fee for weighment while others are allowed to charge up to 5 pies per bag of kernels or two pies per bag of pods. In order to receive the distinguishing badge, the weighman pays Rs. 2, which is refunded when the badge is returned. In 1939-40 nearly 592 weighmen took licences, but many escaped the vigilant eye of the committee.

Besides licensing the traders and regulating the weighment, the committee imposes a levy of six pies per bag of kernels and two pies per

bag of pods taken from the notified area to a place outside it, consumed locally or landed in the notified area and exported subsequently. The levy is imposed on him from whose premises the groundnut has left. When permits are required often, the licencee gets the necessary permits after furnishing adequate guarantee to the committee. If evasion is found out, the person from whose premises the produce has left is asked to pay. When the groundnut produce is transported through a non-notified area to another without being landed in the notified area, it is exempted from such a levy. In cases of doubt, the levy is first collected and later returned on proof of through transport. When oil-mills, rotaries, presses and expellers consume groundnut, the levy is made in the first week of every month which is based on the consumption of groundnut of the preceding month. But chekku owners are exempted from such a levy and also persons who buy ten seers shelled or fifteen seers unshelled groundnut per day.

No trade allowance except tare is allowed on all spot or ready transactions in groundnut. It is 2 lbs. for each single gunny or the actual weight of the gunny or of the packing material used.

We have already seen the constitution of the Disputes sub-committee and now let us consider the fees paid for such arbitration. The fees are charged on the basis of the quantity involved in the dispute and the rate of the fees is as follows:—

(a) *For pods**:—	Rs.
(1) Less than 5 bags, free	
(2) Exceeding 5 bags but not exceeding 50	1
(3) Exceeding 50 bags but not exceeding 500	3
(4) Exceeding 500 but not exceeding 1,000	4
(5) Exceeding 1000 bags but not exceeding	5 plus annas two for every 100 bags or part thereof in excess of 1000 bags.

*Vide South Arcot Groundnut Market Committee Bye-law, No. 23.

(b) *For kernels:*—

	Rs.
(1) Not exceeding 25 bags	2
(2) Exceeding 25 bags but not exceeding 125	5
(3) Exceeding 125 bags but not exceeding 250	10
(4) Exceeding 250 bags but not exceeding 500	15
(5) Exceeding 500	15 plus

annas four for each 50 bags or part thereof in excess of 500 bags. For appeal, the fees shall be double the rates fixed in (a) and (b) supra.

If the disputes are in places outside the market yard, the arbitrators can claim travelling allowances as per M.T.A. Rules in vogue for Government servants. The fees are payable in advance by both the parties. The arbitrators, or the umpires or the Disputes sub-committee, as the case may be, are the only persons authorized to decide as to whom and in what proportion such amounts are refundable. Deducting the travelling allowance from the total amount collected as fees, one-third of the net amount is credited to the committee's funds. The balance is equally distributed among the arbitrators. If an umpire is appointed, he gets half of the amount remaining after deducting a third from the total amount to be credited to the committee's fund. The rest is equally divided among the arbitrators.

Regarding market intelligence, it is in the formative period. The committee at first thought of getting the price quotations directly from London. The cost of the service was out of reach of the means of the Committee and the Marketing Advisor to the Government of India was consulted in the matter. By that time the war broke out in Europe and open trading in London was given up. As such, the idea of getting foreign prices had to be given up.

Now the committee has made arrangements with the exporting firms in their area and get their buying limits confidentially and publish the prices offered by them in the market yards for the sake of the public. As regular price data were not available, no market report or bulletin was published in the first year of the committee. In order to keep the Provincial Marketing Officer in touch with the market situation, weekly statements are sent to him. These are made available to the registered traders also; but as the statements are in English, the traders, who are ignorant of the language, do not evince any interest in them. As such,

the committee proposes to publish a very simple market report in Tamil in course of time.

In purchasing groundnut, generally make certain strict stipulations in the contract forms. The Act has as a provision Rule 19-A which authorizes the committee to draw up just forms of contract and to grade standards of quality. Though the Committee took up this subject with all seriousness, it dropped the matter when it came to know that already the question was engaging the attention of the Marketing Advisor to the Government of India. However, informal discussions were carried on with the local traders and their proposals were communicated to the Provincial Marketing Officer.*

Marketing yard—its working

It is proposed to describe here the actual manner in which the produce is disposed of. We have already seen that besides market yards there are licensed premises. Here let us confine our attention to the manner in which the groundnut brought by the cultivator is sold in the yard attached to the Superintendent of the Market Committee in Cuddalore Old Town.

The transactions that take place in the yard can be classified into two divisions—(1) auction sales and (2) ordinary sales. The market yard plays a prominent part in transactions of the former, while transactions of the latter type are not infrequent. Ordinary sales are conducted at any time, while auction sales are allowed to take place only during stipulated hours.

Let us see at first how an auction sale is conducted. As soon as the cart laden with the produce arrives at the market yard, the cart is unloaded. The load is entered in the register kept for the purpose. The name of the seller, his profession and the approximate quantity by weight are noted therein. The produce is heaped up in mounds on the floor. The heaped up produce is mixed well in order to assure the buyers that the quality is uniform. Unscrupulous sellers place dirt and bad stuff at the bottom of the bag while the top will exhibit pucca goods. To root out such fraudulent methods, the emptying of the bag is advocated. After emptying, each mound is allotted a number.

* See Appendix B: For the working of the Committee in 1940.

Now, word is sent to the traders and the exporting firms. They or their agents arrive at the yard and inspect the quality of the produce. Samples of the lots are taken which are returned later. After consulting their masters, they make a written and signed offer. The offer slips are sealed and sent to the yard and the officer in charge of the yard takes delivery of them after noting the time of their arrival on the envelopes which enclose the slips and drops them into a locked box specially kept for them in the yard. As the auction sales are done on a secret basis, the prices quoted in the slips are kept confidential. Even the superintendent of the yard is not aware of the price quoted in the slips. These slips are accepted till 3 p.m. on each day.

When the clock strikes three, the box is opened in the presence of the superintendent and the slips are taken out. Then the prices quoted in the slips are tabulated showing the highest bidder for each lot. Soon the prices are announced before the sellers, who, if willing, dispose of their produce. The sale is thus effected.

At times, the sellers themselves fix the minimum price for which they will sell the produce. If the price quoted by the buyers were to be below the minimum price of the sellers, the lot is withdrawn from sale.

A sale effected in the above manner is called an auction sale. Besides this, other kinds of sales are in vogue in the market yard. For example, when the seller arrives at the yard after three in the evening and when he is unable to wait till the next day, he readily negotiates with the buyer, if he is found in the yard. When a price is agreed upon the produce is weighed and the sale is effected. Here also the buyer and the seller sign a form kept for this purpose in the market yard.

It is a self-evident fact that the auction system has brought immense benefit to the ryot. Without the least expense of men and money the seller gets the maximum price possible. But the difficulty of reaching the yard still deters the growers from using the market yard to the full. Consequently we notice the prevalence of other kinds of transactions also.

Section IX

TRANSPORT CHARGES

A study of the marketing problem will be incomplete without a scrutiny of the railway freights on groundnut from the hinterland to the ports. Though the produce is brought to the ports in country bullock carts and motor lorries, the major portion of it moves from the producing centres to the ports in railway wagons. But it is unfortunate that the reports of the Railway Board have no separate figures for groundnut. They have included it along with other oil-seeds under heavy merchandise. As such there are insurmountable difficulties in finding out the trends in the rail-borne trade from these general figures. The following figures show the trend in the trade from 1934 to 1938.*

Year.	*Traffic in Tons.*	*Earnings in Rupees*
1934-35	3,357,500	2,98,47,900
35-36	3,084,400	2,77,46,300
36-37	3,842,100	3,31,48,200
37-38	3,516,200	3,03,68,100

Though the traffic has shown a downward trend at intervals, the total earnings show a steady increase with a fall in 1937-38. The foregoing figures are for the whole of India, but now let us examine the rail-borne trade in the Madras Province. The following figures clearly point to the premier position the groundnut trade occupies among the other oil-seeds. The figures are compiled from the "Southern India Commerce."

*Vide Figures from the Railway Board Reports.

Rail-borne Trade of Madras Province (in tons).

Traffic in 1939.

Month.	Castor seed		Groundnut		Gingelly	
	Import	Export	Import	Export	Import	Export
January	.. 451	Nil	5027	1347	2439	1
February	.. 1248	Nil	3113	12155	2808	4
March	.. 1419	42	3222	5854	1404	1
April	.. 1144	16	2794	4017	1776	8
May	.. 1176	18	108	5716	511	9
June	.. 765	18	3513	2145	528	Nil
July	.. 399	8	2114	2809	609	9
August	.. 416	..	678	3258	748	1
September	.. 1577	5287	56	907	1329	16
October	.. 2564	155	71	871	2116	2
November	.. 1109	5	4775	931	1433	32
December	.. 227	103	6520	15184	2776	80
	12498	5609	31995	55200	18482	159

Traffic in 1940.

January	.. 2819	90	1886	2494	1053	17
February	.. 8304	169	1730	7888	3669	77
March	.. 5414	104	2217	99390	3272	74
April	.. 4036	131	3132	35707	1427	3
May	.. 2202	88	1960	6818	859	7
June	.. 4303	12	712	3559	517	2
July	.. 123	..	303	..	538	1

From the above figures it can be said that in 1939, for which complete figures are available, the imports of groundnut into this province

was 2·5 times that of castor and 1·75 times that of gingelly. On the export side, we see that, in comparison with groundnut, castor and gingelly pale into insignificance. Caster forms only a tenth of the quantity of groundnut exports, while gingelly forms only 0·3%.

As groundnut producing areas are mainly found in the metre gauge tract, the traffic on these lines is the heaviest. "The total freight on the broad gauge amounted to 1,01,400 tons; on the metre gauge it was 2,46,300 and on the narrow gauge it was only 9,600 tons."

Regarding railway risk, groundnut has been classified and placed in the fourth class, the maximum and minimum for that class being 0·62 and 0·166 pie per maund per mile. But when the produce is carried in wagon loads of not less than 300 maunds in the broad gauge and not less than 160 maunds in the metre and narrow gauges, it is classified as 2A. at railway risk and 2 at owner's risk. The maxima and minima are 0·46, 0·42 and 0·109 pie per maund per mile respectively. In the South Indian Railway even when the produce is offered in bulk for transport, it is classified in the fourth class. Though it falls heavily on the producer, it has been contended that the producer could successfully bear the burden since this presidency is the premier producing centre for groundnuts. On the other hand it can be argued that by a reduced rate not only can the pride of the place be retained but also the economic prospects of the tract enhanced.

In South Arcot and the adjoining districts, the produce is sent to the ports by rail at railway and not at the owner's risk. If it is contrariwise, the rates will be lowered and thus confer a boon on the "producer-shipper." Scheduled rates are non-existent in the South Indian Railway. Though station-to-station rates are quoted, scheduled rates will in fact bring great benefits. For stations where station-to-station rates are not applicable, ordinary class rates are levied which are higher than those in the general classification. As such, a small trader from a station of secondary importance has to bear heavy rates if he wants to book his produce to any other station or port.

The station-to-station rates are a common feature in the S. I. R. Since South Arcot stands foremost in the production of groundnut, rates are quoted from and to places in the district. Cuddalore commands the major portion of groundnut export trade and, as such, rates are quoted from other stations to Cuddalore.

The following are a few station-to-station rates in the S.I.Railway: *

Conditions of carriage.	From	To	Rates per maund.	Remarks.
W/160 O.R.L.	Anamalai Road (via Dindigul)	Cuddalore Jn. Madras Beach	0-10- 3	
do.	do.		0-10- 3	
do.	Arni Road	Cuddalore	0- 4-10	
do.	do.	Madras Beach	0- 5- 0	
do.	Panruti	Cuddalore	0- 1- 2	Includes reduced terminal charge of 11 pies per maund free of short distance charge.
do.	Polur	Cuddalore	0- 4-10	
W/300 O.R.L.	Karur	Cuddalore	0- 8- 4	
W/160 O.R.L.	Ulundurpet	Cuddalore	0- 2- 0	
do.	Vriddhachalam	Cuddalore	0- 1- 6	Free of short distance charge.

In the above table all the rates are at owner's risk, while the class rate alone is at the railway risk. Excepting Karur to Cuddalore, in all the other cases the wagon specification is 160 maunds and the requirement is that the loading and unloading is to be done by the public and not by the railways.

Let us now take a few rates for detailed investigation. The station-to-station rate from Anamalai Road to Madras as well as for Cuddalore is the same. Regarding Arni to Cuddalore the special rate is 0-4-10 per maund per mile, while the class rate comes to 0-5-3. The special rate from Arni to Madras, the distance of which is twice the distance from Arni to Cuddalore, is 0-5-0. In the class rate it comes to about 0-11-0 per maund per mile. The two examples clearly indicate that the railway authorities intend to minimise competition in exports between the ports.

Apart from these rates, periodically new rates are put into force, and these are withdrawn after a certain period. A few rates are given for comparison on page 80**:—

*Figures are compiled from IB—S.I.R. Goods Tariff.

** Vide "Road-Rail Transport" by S. R. N. Bhadri Rao, pp. 186-87.

GROUNDNUT

Conditions.	From	To	Rate per maund	Date of introduction
W/300 O.R.L.	Omalur	Cuddalore	0-7-6	20—12—1937.
W/160 O.R.L.	Pennadum	Cuddalore	0-2-5	
do.	Vellore Cantonement	Cuddalore	0-5-3	
do.	do.	Pondicherry	0-5-3	
do.	Krishnagiri	Cuddalore	0-7-4	These rates were withdrawn as per local rate advice No. 5 of 1938.
do.	Morappur Jn.	Cuddalore	0-8-0	

These rates are quoted to meet the exigencies of particular situations or to help the movement of traffic in bulk.

While the foregoing rates apply to local booking, station-to-station rates are quoted for through traffic. There are three such items in Part IB of the South Indian Railway Goods Tariff. They are as follows:—

Item No.		*From*	*To*	*Rate per maund*
W/300	O.R.L.	Dasampatti	Madras Via Jalarpet.	Rs. As. Ps. 0 6 11
W/160	O.R.L.	Dharmapuri	„	0 8 8
		Krishnagiri	„	0 7 · 0
W/300	O.R.L.	Samalpatti	„	0 6 11
		Tirupattur	„	0 6 0

Groundnut oil is classified in the "C" division under oil together with gingelly and castor oil (not otherwise stated). The rate at railway risk according to class 2A. is 0·46 pie and at owner's risk is 0·42 pie per maund per mile. For safety in transport, the railway authorities insist on packing in metallic cases. Like groundnuts, the oil too has

station-to-station rates. The requirements regarding handling are the same as in the case of groundnut.

For groundnut oil too there are rates quoted for through traffic. The rate per maund on oil booked from Pollachi to Shalimar is Rs. 1-6-0. The specification is that it should be packed in tins, sound wooden barrels or in sound iron drums.

These freight rates are high when compared with the prices. For example, the rate from Pollachi to Madras, Negapatam or Pondicherry is the same rate of 10 annas per maund. "Comparing the freight rate with the price per maund, the former forms 14 per cent at current prices. These rates refer to local bookings only, but when through bookings are considered the percentage will be higher." Taking the class rate from Pollachi to Madras which is Re. 1-1-11 and comparing it with the highest February price, the incidence will come as high as 27½%. Though such a comparison is not right when station-to-station rate is available, it has to be taken; for station-to-station rate is allowed only on certain specific conditions. The station-to-station rate is allowed only in cases when the consignment equals minimum wagon load. So smaller consignments are subjected to the class rate. Moreover, the present surcharge of 12½% on all goods traffic *ipso facto* increases the burden. "It is wrong to charge staple commodities which yield the largest returns more than what they can bear, and it is an injustice to increase the rates."* The Acworth Committee even, as early as the third decade of this century, has criticized the surcharge. The Railway Member launched the surcharge on the ground that railway earnings were going down. But this argument falls to the ground when viewed from the economic stand point. To enhance earnings, the feasible method is to lower the rate. Low freight rates will yield increased railway revenues. The surcharge is a bane on the regular trade.

* "Road-Rail Transport," See Introduction by Dr. B. V. Narayanaswamy, page xxix.

Section X

EXPORT TRADE

While taking stock of the available supplies of a commodity, it is necessary to look to Production first; but the imports of the commodity have to be taken into account where they form a considerable bulk of the total quantity. In the case of groundnut, this problem is almost non-existent as the import of groundnut is extremely small. The absence of any mention of import trade of groundnut in the Review of the Trade of India is sufficient proof of the negligible quantity of the produce that comes in annually. But some idea of the same can be had from the Sea-borne Trade of India and the following table shows the quantity and value of the imported produce for a few years.

Imports of Groundnut

Year	Quantity. Tons.	Value. Rs.
1909-10 to 1913-14	159	
1922-23	2	872
1923-24	15	3,453
1924-25	103	28,799
1925-26	53	7,513
1926-27	18	5,226
1927-28	60	
1928-29	61	
1929-30	132	
1930-31	30	

Year.	Quantity. Tons.	Value. Rs.
1931-32	66	13,765
1932-33	5	1,891
1933-34	1	1,012
1934-35	9	1,764
1935-36	1	683
1936-37*	15	1,981
1937-38*	209	29,670
1938-39*	96	14,229

The imports have thus ranged from 2 and 1 in 1922-23 and 1935-36 to 132 and 209 in 1929-30 and 37-38. The imports mainly come from Ceylon, the Straits Settlements, Mauritius, the Dependencies and a few other foreign countries. The table below will show the details:—

	22-23.	23-24.	24-25.	25-26.	26-27.	31-32.	32-33.	33-34.	34-35.	35-36.	36-37
Ceylon ..	—	11	—	1	—	—	—	—	—	—	—
St. Settlements.	2	4	2	35	18	29	4	1	4	1	—
Burma ..	—	—	—	—	—	—	—	—	—	—	—
Mauritius and Dependencies.	—	—	101	—	—	—	—	—	—	—	—
Other British Possessions ..	—	—	—	1	—	1	1	—	—	—	15
Total British Possessions ..	2	15	103	37	18	30	5	1	4	1	15
Java ..	—	—	—	—	—	36	—	—	—	—	—
Total foreign countries ..	—	—	—	16	—	—	—	—	5	—	—
Grand Total ..	2	15	103	53	18	66	5	1	9	1	15

* Includes imports from Burma.

In 1937-38 Burma sent in 191 tons and 93 in 38-39. In 1937-38 18 tons were imported from British Possessions other than Burma thus making up a total of 209 and 96 for the two years respectively. The largest single consignment for the first five years for which figures are given above have come from the Straits Settlements and Mauritius and the Dependencies. These small quantities of imported seed are absorbed in the following areas as shown below. Bengal and Burma have been the largest importers.

Shares of Imports between Provinces

	Bengal.	Bombay.	Sind.	Madras.	Burma.
1922-23	—	—	—	—	2
1923-24	—	5	—	6	4
1924-25	101	—	—	—	2
1925-26	8	4	—	1	40
1926-27	—	—	—	—	18

	Bengal.	Bombay.	Sind.	Madras.	Burma.
1931-32	—	36	—	—	30
1932-33	—	—	—	—	5
1933-34	—	—	—	—	1
1934-35	—	5	—	—	4
1935-36	—	—	—	—	1
1936-37	—	13	—	—	2
1937-38	191	—	—	18	—
1938-39	96	—	—	—	—

During all these years groundnut was imported into India only through the British Ports, and the French Ports did not import any.

Exports.

As has been pointed out in a previous section a large portion, sometimes as much as three fourths of the total production, is being retained for consumption within the country. In spite of this dominant tendency for retaining a great part of the total production, India provides nearly two fifths of the groundnut entering international trade.

An idea of the percentage of exports to total production can be had from the following table compiled from the Review of the Trade of India.

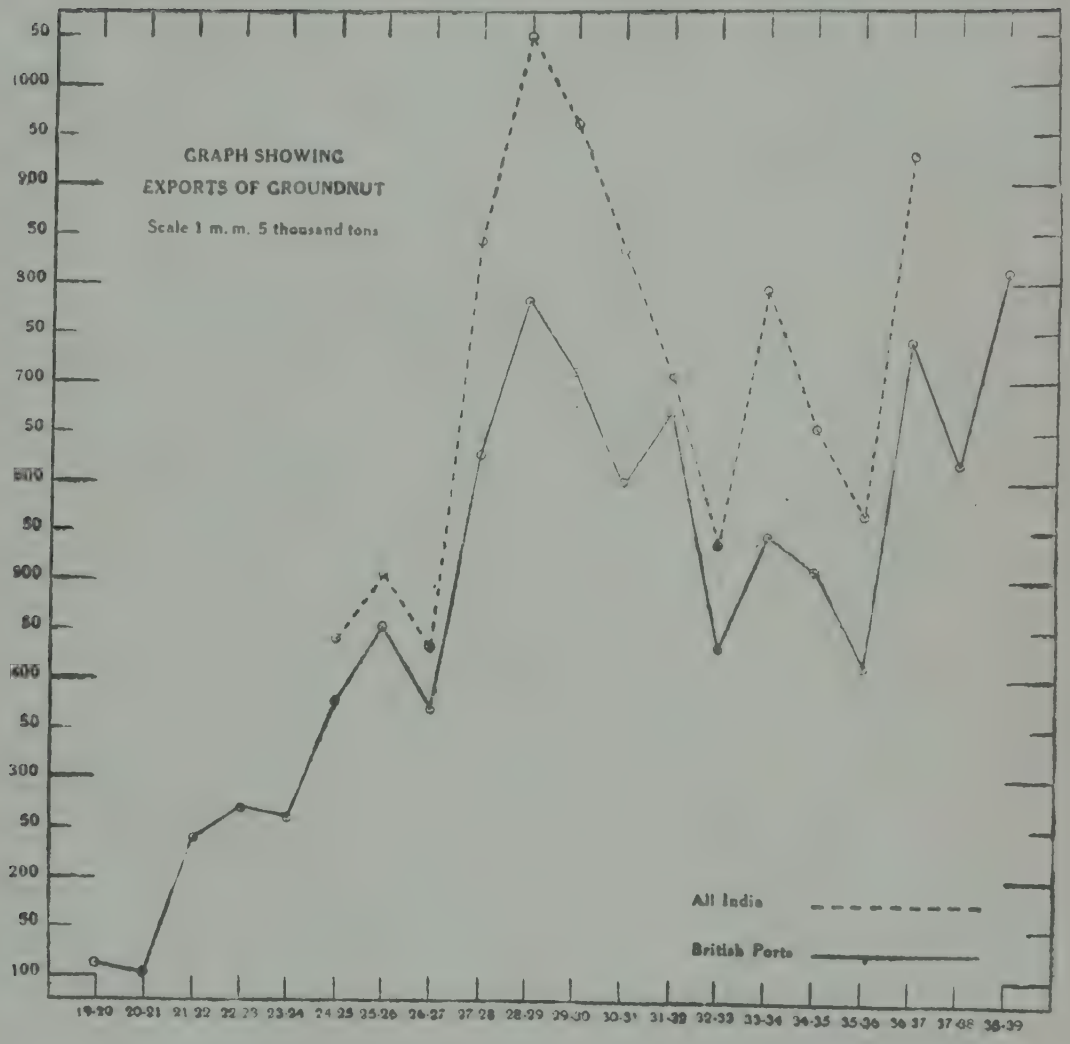
Percentage of Indian Exports of Groundnut to Total Production.

Pre-War Average	.. 35	1928-29	.. 26
War „	.. 12	1929-30	.. 29
Post War „	.. 19	1930-31	.. 19
1919-20	.. 13	1931-32	.. 30
1920-21	.. 10	1932-33	.. 15
1921-22	.. 25	1933-34	.. 17
1922-23	.. 28	1934-35	.. 27
1923-24	.. 24	1935-36	.. 19
1924-25	.. 27	1936-37	.. 27
1925-26	.. 24	1937-38	.. 18
1926-27	.. 16	1938-39	.. 28
1927-28	.. 24		

This table makes possible an interesting observation. When a graph is drawn with the averages for two year periods, we get a curve which shows an up and down wave motion; when the averages are struck for four year periods, the graph obtained represents a clear wave form. Though the number of observations have been small, one can venture to suggest that at the end of the 8th year or thereabout from the year of minimum exports, there is a marked tendency to retain or hold a larger percentage of total production within the country.

Variations in exports have been great even after making due allowance for occasional incomplete and unsatisfactory recording of facts. These can be explained by factors both external and internal. The increased cultivation of groundnut in other lands and their competition with the Indian produce in the export markets, the increased uses to which the raw produce was being put, the demands from new countries as well as the decline in the off-take of some of the customers are some of the external factors causing fluctuations. In a country like India, the influence of exchange rates is an important factor affecting foreign exports. Further, the difficulties of shipping, trade treaties and the rise of new devices checking the natural trend of foreign trade have been seriously impeding the natural growth of the export trade at certain times. It needs to be added that the internal production, consumption and trend of prices, mutually interdependant as they are, also considerably influence the export trade of the country.

GRAPH SHOWING EXPORTS OF GROUNDNUT



A study in detail of the rise and fall of exports of groundnut would enable us to trace the factors that have been influencing the exports from time to time. The total exports from India can be gathered by totalling up the individual exports from the British, French, Portugese (Indian) and Kathiawar ports.* In this task one has to face the lack of material regarding exports of groundnuts from a few of these ports for some years. The figures given below have been made as accurate as possible.

Groundnut Exported from India in thousand tons.

	Exports from Br. Ports.	All Ports.
Pre-war average	212	
War average	119	
Post-war average	195	
1919-20	112	
1920-21	104	
1921-22	236	
1922-23	267	
1923-24	257	
1924-25	376	437
1925-26	455	507
1926-27	368	433
1927-28	613	844
1928-29	788	1052
1929-30	714	957
1930-31	601	836
1931-32	672	709
1932-33	433	536
1933-34	547	797
1934-35	511	659
1935-36	413	565
1936-37	740	927
1937-38	619	—
1938-39	835	—

The table clearly shows the trend towards increase and decrease. From 1924-25, a regular increase is noticeable upto a maximum of nearly

* Vide Appendix: Table IX.

1052 thousand tons in 1928-29 with a slight interruption in 1926-27. Thereafter, there has been a fall which, though gradual at first, reached its lowest level in 1932-33. The fall from 1928-29 has been explained as "purely a result of the general economic depression." "The decrease in 1926-27 has been attributed to the holding of supplies in the hope that prices which were beginning to fall would recover. Falling prices in the year 1932-33 may also account for the magnitude of the drop in exports during that year; while the failure of prices to recover apparently led to the release of large quantities in 1933-34." The figures of British Ports, which alone ship nearly half of the exports, show the same trend prevailing. Indian exports in 1935 were far below that of any year since the maximum in 1928-29. Besides the general cause attributed to the fall since 1929, the decreasing use of groundnut oil in margarine and soap manufacture has also been a cause of the fall in demand for the raw product in foreign countries. The year 1937 is peculiar for the reason that there was an even distribution of the exports of groundnut between the five important countries; all of them viz., United Kingdom, the Netherlands, France, Germany and Italy, took more or less the same quantity of the raw produce, i.e., about 15%. Of these, Italy was the heaviest importer with about 18% of exports to her credit. 1938 was the only year of normal exports before the war began to play havoc on trade. The effect of the present war on the export trade of groundnut will be considered later.

A word about the total value of our exports of groundnut is necessary. The importance of the groundnut crop from the commercial point of view can be gauged from the following table which shows the relative value of groundnut export trade to total exports in millions of rupees. The table has been compiled from "Oil-seeds Survey" of the years 1936, 1937 and 1938, published by the League of Nations.

Table showing Relative Value of Groundnut Exports to Total Exports (Millions of Rupees).

Year.	All Domestic Produce.	Groundnut.	Percentage.
1926-30 (average)	3093	146	4·7
1931-35	1500	74	4·9
1936	1806	95	5·3
1937	2024	108	5·3

Thus the export value of groundnut trade to total trade has increased from 4·7% to 5·3%; as such, its importance as a commercial crop can be easily appreciated.

Madras being the largest producer of groundnut with as much as 3·3 million acres under cultivation, the exports from Madras Presidency have always been very great. The following table compiled from the notes of the Review of the Trade of India shows the increasing importance gained by Madras in the post-war years.

Exports from the Madras Presidency.

	Percentage to total exports.
1930-31	.. 76
31-32	.. 74
32-33	.. 81
33-34	.. 83
34-35	.. 85
35-36	.. 81
36-37	.. 86
37-38	.. 91
38-39	.. 92

With a slight fall in 1935-36, the exports from the ports of the Madras Presidency have been steadily increasing. In 1930-31 Madras claimed three fourths of total exports, while in 1938-39, her exports were more than 9/10 of total exports. The rest of the exports has been made through the ports of the Bombay Presidency, and from being the exporter at one time of nearly a quarter of total exports, Bombay has slowly declined until to-day she shares only one-tenth of the total exports.

The groundnut export trade can also be studied from the point of view of the share of the French and British ports in the export trade. Such a study brings out the fact that the French ports have been gradually declining in importance, while the British have been steadily gaining ground. This point will be borne out by the following figures:—

GROUNDNUT

Percentage of Exports through French Ports.

1909-10 to 1913-14	average.	.. 30
1924-25		.. 14
25-26		.. 10
26-27		.. 15
27-28		.. 12
28-29		.. 9
29-30		.. 12
30-31		.. 10
31-32		.. 5
32-33		.. 5

The same feature has been noticed in the exports of groundnut between Pondicherry and Cuddalore Ports. Pondicherry has been losing ground. This has been taken advantage of by the Cuddalore and Porto Novo Ports in the South Arcot district. It is noteworthy that merchants from the French territory of Pondicherry come to the Cuddalore port for exporting goods; sometimes they are prepared to bind themselves to pay such new taxes as the Sales Tax. The deflection of trade from Pondicherry can only be explained by the rather complicated new export and port duties levied at French Ports.

With an annual average of nearly 66,000 tons in the pre-war quinquennium and 40,000 tons in the period 1924-28, France has been the main market for the exports from French Ports. Even from the exports of British Ports, French off-take held the first place for many years till Germany outbeat her for the first time in 1927-28 and 1928-29. For the Portuguese Indian Ports, Germany, the Netherlands and Italy were the chief consignees during the years 1927-31 with an annual average of 55,000, 37,000 and 20,000 tons respectively. The Netherlands provided the chief market for the export from Kathiawar ports for a long time; and the United Kingdom came next.

France has always been the most important purchaser of Indian groundnut exported through British ports in the pre-war as well

as the post-war days. The export figure in the pre-war quinquennium can be roughly put at 170,000 tons per annum, but the average rose during the period 1924-33 from 20,000 tons to 190,000 tons. Expressed as percentages, the Indian imports rose from 40% in 1922 to about 62% in 1933 of the total imports of groundnut into France. The averages indicated in the last column of the following table show how the trend towards increase continued upto 1933. Since then, French imports have been rapidly declining. Expressed in tons, she took only 130,173 and 96 thousand tons in 1935, 36 and 37 respectively as compared to the peak figure of 219 thousand tons in 32-33.

That the French imports of groundnut have been rapidly declining can be well grasped from the following table, compiled from the Review of the Trade of India. She has been importing some quantity of unshelled nuts as well as shelled nuts; the quality of shelled nuts imported has not been very high. It is said, that she sometimes went in for even the *'blacks,'* whose presence is objected to, for instance, by the British buyers.

The table reveals how after reaching the maximum in 1925 the unshelled groundnut imported into France has been slowly declining. It can be said that to-day the export of unshelled groundnut is insignificant. Regarding imports of shelled groundnut, the percentage averages for periods of four years show the trend clearly. The increase is visible upto 1933, after which there is a sudden fall from 49·95% to 27%.

Imports of Groundnut into France in 1000 *Quintals.*

Year.	Unshelled.	Shelled.	Percentage.	Average for 4-year periods.
1913	325	2442	58	
1914	265	2700	58	
——	——	——	—	
1922	——	1626	40	
1923	——	2315	50	
1924	106	1747	40	
1925	118	1948	40	42·5%

Year.	Unshelled.	Shelled.	Percentage.	Average for 4-year periods.
1926	102	2060	42	
1927	72	1602	35	
1928	33	2680	49	
1929	32	2919	49	43·75%
1930	46	2548	41	
1931	41	2462	40	
1932	15	2595	53	
1933	7	3070	62	49·%
1934	—	1527	23	
1935	—	1736	29	
1936	—	1990	29	
1937	—	1153	28	27·25%
1938	—	2113	46	

The reason for this is to be found in the imposition of an import duty in France. There was no such duty on groundnuts imported into France previous to the year 1933; but from 11th August 1933, groundnuts "other than those produced in French Colonies and Protectorates were subjected to a duty of 8 Francs per 100 kilograms if undecorticated and 11 grams per 100 kilograms if decorticated." These duties were further raised in 1934. These and other duties levied in France were meant to subsidise the production of oil-seeds in the French Colonies and Protectorates. The bulk of the imports of groundnut into France is now secured from her Colonies. She has regulated her imports in recent years by the quota system. Since July 1934, she has set apart one half of imports for the produce of her Colonies.

Though France has declined much in importance as an importer of Indian groundnut, still a greater part of our exports go to her. Analysing the distribution of exports from British ports between various countries for the three years, 1935, 1936 and 1937, the following results are secured:—

*Distribution of Exports through British Ports (in percentages)**

	1935	1936	1937	Average for 3 years.
United Kingdom	22·1	16	15	18
The Netherlands	17·9	26	17	20
France	36·3	29	15	27
Belgium	2·3	4	6	4
Germany	15·1	14	14	14
Italy	2·7	6	18	9
Egypt	0·6	—	10	3
Denmark	—	1	less than ·5	·5
Other countries	3·0	4	5	4
Total	100	100	100	

Thus France, the Netherlands and United Kingdom occupy the first three places respectively and together share about 65% of total exports. Germany and Italy come next, sharing more than a fifth and nearly a quarter respectively of the total exports.

The Indian trade in groundnut with the Netherlands has been an instance of remarkable growth. From 150 tons per annum in the pre-war quinquennium her export trade with the Netherlands rose up 40,000 tons in 1925-26 and mounted up consistently till it reached 170,000 tons in 1930-31, which is the maximum she has imported from India during the period under review. A feature of the trade with the Netherlands is that a greater part of the exports to that country are not consumed there itself, but are re-exported.

Trade with United Kingdom also experienced a tremendous increase during the third decade of the 20th century. From about 2000 tons in the pre-war quinquennium, it increased to nearly 5 times in 1925-26. Exports to United Kingdom increased without any interruption up to

* Figures from Sea-borne Trade of India are given in the Appendix: Table X.

1928-29 when they came to roughly 53,000 tons; with a fall in the next year, it shot up to 78,000 tons in 1931-32. In the next year, there was a precipitous fall by nearly 50% in the exports to U.K. and though there was a recovery in the next two years, in 1935-36 the exports once again fell by about 50% compared to the previous year's maximum of 134000 tons. Though exports have increased since then, they have not yet attained the level of 1934-35 which was the peak year for the period under review.

There was a marked improvement in the trade between Germany and Italy in the post-war days. Both these countries imported the maximum amount in 1928-29. Since then, there has been a fall and they touched the lowest figure in 1932-33. While German imports have been steadily increasing from 1932-33, Italy's share decreased very much once again in 1935-36. Both the countries imported the maximum quantities in 1937-38. From a study of the imports of groundnut by these two countries, one is struck by the similarity of the trends between them.

Trade with Belgium and Spain has been to a great extent curtailed, owing to Belgium's preference for French West African produce and Spain's Official Decrees severely restricting the imports of Groundnut into Spain from 1926.

The export trade of Indian groundnut is mostly after decortication. Though it is well known that the sending of undecorticated nuts would be beneficial to buyers, as it would preserve the quality of the seed, the high freight charges of undecorticated nuts compel the Indian merchants to export only decorticated nuts. It is said that shelled nuts occupy only half the space required by unshelled nuts.

War and Groundnut Trade.

The present war has seriously affected Indian economy on many sides. Indian exports have greatly suffered. While the markets of the belligerents have been almost closed, the serious lack of shipping space has greatly diminished exports even to non-belligerents. Of the many commodities that have suffered because of this war, groundnut is one and it has lost the greatest share of the total value of our exports to European countries.

On the basis of the figures of 1937, it is seen that Italy and Germany have been importing roughly a third of our total exports in groundnut;

and together with the Netherlands, they occupied 50% of our total exports. Along with France the exports to these four countries amounted to 67% of the total exports. In this connection, we have to note that in the four years previous to the outbreak of the war, the average annual purchases of the Netherlands, France, Germany and Belgium, amounted to 368 thousand tons. In the year immediately preceding the war, they imported from India about 562 thousand tons. The volume of exports from British ports decreased by 50% in the case of the Netherlands and Germany in 1939-40 as compared with 1938-39. Exports to France have declined in the same period from 15,000 to 9,900 tons. In the case of Italy, exports from British ports declined by about 1500 tons. While there has thus been a contraction in the case of Continental countries, there has not been a corresponding increase in the intakings of the United Kingdom. Between 1938-39 and 1939-40, an increase of only 1200 tons is noticeable, an increase not even sufficient to compensate the loss on account of Italy. The loss in value may be estimated from the following figures :*

Value of Groundnut Exports from India to Europe in 1938-39

(Figures in Rs. lakhs.)

Germany	..	134
The Netherlands	..	276
Belgium	..	78
Denmark	..	27
Norway	..	12
Sweden	..	1
France	..	178
Italy	..	41
Czecho-slovakia	..	40
Total	..	787

Thus on the basis of 1938-39, it may seem that India has been deprived of markets that were consuming nearly 8 crores worth of groundnut.

* Taken from the Meek-Gregory Report.

But we have to consider that their intakings in 1938-39 were "more than 50% greater than their average for the previous four years, and in making an estimate of market lost, a corresponding reduction should really be made in the value of figure of Rs. 8 crores given above." Anyhow it cannot be denied that markets that would consume about 5 crores worth of groundnut have been lost at present. It was with a view to finding out how far U.S.A. may be able to absorb the surplus quantities left in India on account of the war, that the Meek Gregory Mission was sent to America. Their findings relating to groundnut may be quoted here:—

" ....So far as groundnuts are concerned, the U.S.A. is also a large producer and in recent years the government diversion payment programme has tended to increase the domestic production of both groundnuts and groundnut oil. If the import of groundnuts became large, the whole question would probably come up for examination with possible unfortunate reprecussions on India's large trade in Cashew Kernels. The U.S.A. is still capable of a larger domestic production of groundnuts. There does not appear, therefore, to be any large alternative market for this commodity in the U.S.A."

Section XI

PRICES

The price statistics of agricultural commodities maintained by the Government is far from satisfactory and this point has been amply illustrated in the various marketing reports. The price statistics supplied by Governments differ from the trade prices. Moreover, we notice different figures are given in different Government reports. Hence great difficulties are encountered in making a detailed study of prices. But in the absence of any organised trading especially in groundnut and the regular maintenance of records by private bodies, we have necessarily to fall back upon Government price statistics as the last resort. In the following pages the prices quoted are taken from the Indian Trade Journal unless otherwise stated.

Before considering the manner in which prices are actually determined in the markets, it would be worth while to study the trend of prices of groundnut. As the quality of nuts produced in different areas is different, a single price for the whole of India becomes chimerical and an impossibility. The two important producing centres are Madras and Bombay of which the former is the more important in as much as 60% of the total Indian production comes out of Madras. Further, it was seen in the last section that exports from Madras have been slowly gaining ground, with 9/10 of total exports in 1938. Under these circumstances the Madras prices need a careful study, as it may be considered not only to represent, but control in a more or less reasonable degree the price fluctuations with regard to groundnut for the whole of India.

The following table gives the average annual prices per French candy of 500 lbs. The manner in which these prices have been calculated may be mentioned. The weekly prices as given in the Indian Trade Journal are taken and the monthly averages calculated. From these monthly prices the annual average prices are derived.

Year.	*Price*	*2 Yr. averages*	*Year.*	*Price*	*2 Yr. averages*
	Rs.			Rs.	
1922	63·8		1931	27·6	
			1932	35·1	.. 31·3
1923	64·9		1933	24·9	
1924	64·7	.. 64·8	1934	20·9	.. 22·9
1925	57·3		1935	35·7	
1926	52·0	.. 54·6	1936	35·4	.. 35·5
1927	52·8		1937	33·2	
1928	54·4	.. 53·6	1938	24·7	.. 28·9
1929	49·5		1939	27·6	
1930	35·6	.. 42·5	1940	26·9	.. 27·2

From the second column of the above table wherein the averages for the two-year periods are given, the trend of price changes can be understood. Except in the first three years wherein the prices have been fairly steady, a tendency for prices to fall is recorded from 1925, when it fell from Rs. 64·7 to Rs. 57·3 per candy. Since then, the two-year averages indicate a precipitous fall during the periods 1929 and 1930, 1931 and 1932, and 1933 and 1934. The prices in the last period, i.e., 1933 and 1934, touched the lowest figure of Rs. 20·9 in 1934. In the next year the prices shot up by nearly Rs. 15 and remained stationary about that level in 1936 also. But once again falling prices made their appearance. During the four years from 1937, the lowest figure was recorded in 1938; and though there was a slight recovery in prices in the two succeeding years, the trend of decreasing prices has continued as is evidenced by the figures of two-year averages.

The precipitous fall of prices from 1929 may be explained as the outcome of the depression, as also of the restriction of imports into Germany arising out of her exchange difficulties. The heavy production of whale oil resulting in the decline of the demand of groundnuts, the general increased production of groundnut and other oil-seeds, the decline owing to the competition from cheap butter, in the manufacture of margarine, for which groundnut oil is most useful, and the decline in the demand in Europe for oil-cakes,—all these may be added as subsidiary factors, in addition to the general considerations cited above, as being partly res-

ponsible for the steep decline in prices since 1929. It might be interesting to note that it was during this period of declining prices that the exports increased very much. The recent fall in the prices may be explained as being due to the general decline in commodity prices since 1937, to the record production of groundnut in that year and also to the restriction of French imports of Indian groundnut to which reference has already been made in the last section. In our study of groundnuts the monthly changes in prices is as important as the annual average prices. The following table gives the average prices for every month during certain periods. It is possible to infer from such a table whether there is any seasonal fluctuation in prices.

Month.	1922-25	1926-29	1930-33	1922-38
January ..	59·0	50·7	31·7	41·9
February ..	60·7	51·8	33·1	43
March ..	64·5	52·0	33·6	44
April ..	64·3	51·7	32·9	43·8
May ..	64·6	53·1	32·1	44·1
June ..	64·3	53·5	30·7	43·7
July ..	64·5	54·0	33·1	44·6
August ..	65·0	53·0	32·0	44·5
September ..	65·2	52·9	29·9	43·9
October ..	64·6	54·2	28·5	43·5
November ..	61·0	50·1	26·8	41·0
December ..	57·1	49·1	25·5	39·5

The table reveals that there are not very violent seasonal fluctuations; but it would be untrue to deny such fluctuations altogether. The first arresting factor that is visible from the table is the increase in prices from January to March. In some years this increase continues up to May also. Generally, from March to October, though there are fluctuations, the prices are fairly steady. From November onwards there is a definite trend for prices to fall down, a tendency which continues to the next month also. The fall may perhaps be due to the plentiful supplies that come to the market during harvest time.

GROUNDNUT

The War and its effect on Prices.

The effect of war on the prices of groundnut may be studied, as it would be of some help in understanding the present plight of the cultivators of this crop. The war broke out in September 1939, and the year recorded the maximum off-takings by the Continental countries of nearly 568 thousand lbs. The following table shows the trend of prices month-war since January, 1939 to February, 1941.

Months	1939	1940	1941
January ..	24·4	29·6	19·6
February ..	24·5	29·7	19·2
March ..	24·3	31·2	
April ..	24·6	33·2	
May ..	27·8	32·4	
June ..	29·7	27·8	
July ..	28·2	23·9	
August ..	29·0	24·1	
September ..	28·3	25·2	
October ..	29·8	24·3	
November ..	30·8	20·9	
December ..	30·1	20·3	

After being steady at about Rs. 24 during the first four months of 1939, the price showed a definite trend towards increase, which, though upset in particular months, continued upto nearly 6 months after the war had broken out, recording a rise of nearly Rs. 9 during a period of 16 months. Thereafter there was a fall far steeper than the rise. From Rs. 33 in April 1940, it came down to Rs. 20 by the end of the year i.e., within 8 months the prices had declined by about Rs. 13. The fall continued in the present year also coming down as low as Rs. 19·2 in February 1941. The seasonal decline in prices that is generally noticeable in November and December is not to be found in the year in which the war broke out. This feature as well as the increase running up to April 1940 may be explained as due to the heavy purchases in 1939. Part of the increase in prices can be ascribed to the psychological reactions that were visible

during the first few months of the war and the consequent general increase in prices during the war period. The subsequent fall in prices must be attributed to the war, to the closure of the Continental markets owing to the blockade. The fall of France, and the increase in freight and insurance charges had their effect in pushing down the Madras prices. The lack of shipping space which restricted to a certain extent the usual imports of the non-belligerents, resulted in intensifying the glut in Indian market with consequent undesirable reactions on prices.

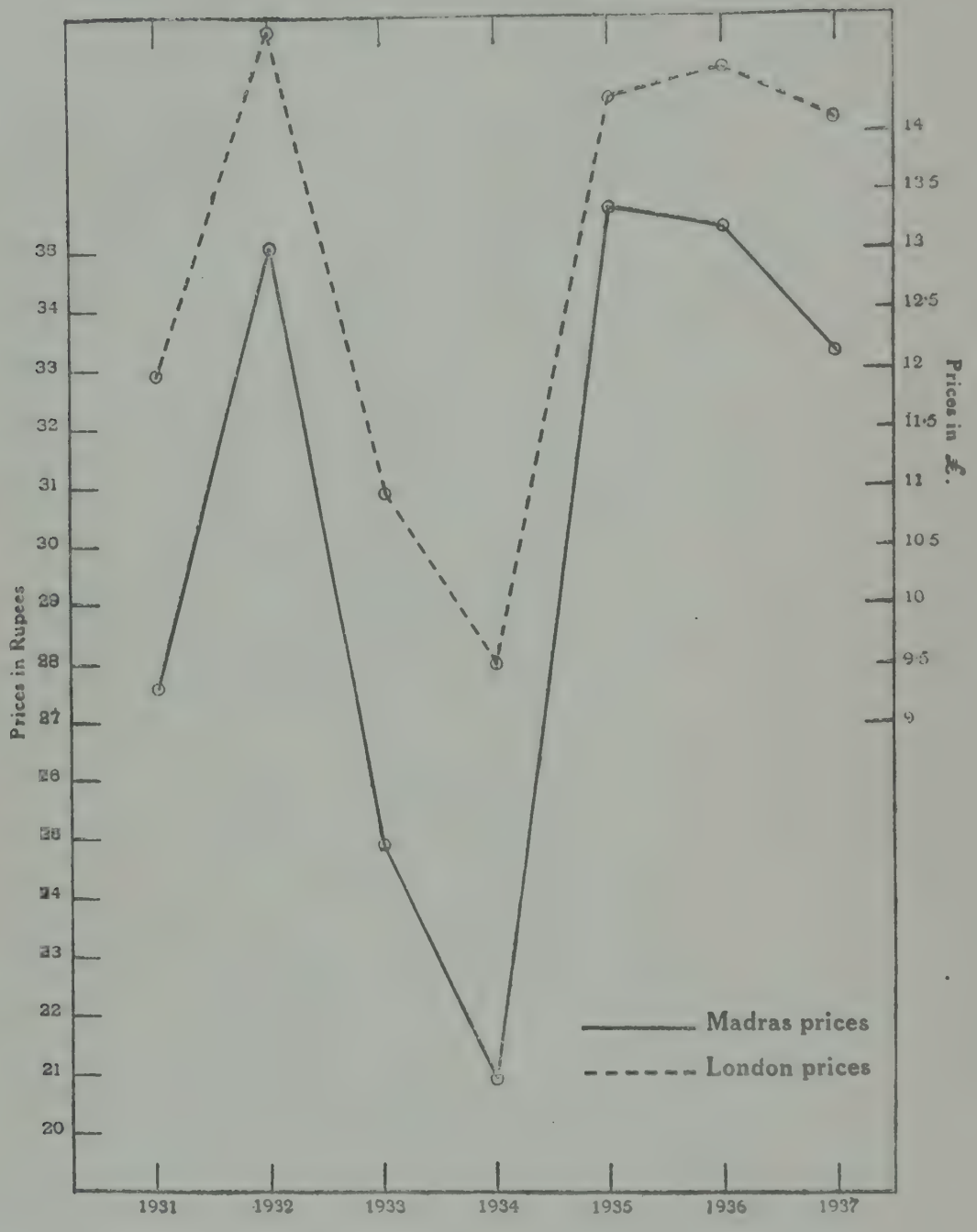
A comparison of Indian prices with those of foreign countries has not been attempted as the data necessary for such a comparison is not available. Neither in the Agricultural Statistics for British India nor in the International Review of Agriculture are prices given for the Continental markets which are our most important customers. As the cake and oil alone are imported by foreign buyers, the little information that is available is related to the products of groundnut and not groundnut seed itself. But as most of the transactions are done under the contracts of the Incorporated Oil-seeds Association, as in the case of linseed, the London prices may be regarded with a fair amount of accuracy as the indicator of the prices in the Continental markets. As such, a comparison with the prices in the United Kingdom may be of some value.

That the Madras prices have been closely following the movements of London prices may be well understood by reading the following extract describing the price movements in London.*

"In 1921 prices were very unsteady, but in subsequent years until 1928, they showed greater stability with a slight downward trend. Thereafter, the decline became more substantial and with an interruption in the latter part of 1931 and the early part of 1932, due to the suspension of the gold standard, continued down to the early part of 1934. The fall which was particularly marked in 1933 continued until March 1934 when prices fell to an average of £8-5-0 per ton. this being about one-half of the average price in March 1932 and the lowest price realised until then for groundnuts in the United Kingdom, since groundnut prices were recorded. The fall in gold prices was even more severe, the average prices in March 1934 representing only 40% of March 1932 level. There was some recovery after March 1934 and by September sterling prices reached £10-15-0 per ton or slightly more than in September 1933."

* Oil-seeds Survey, p. 208.

GRAPH SHOWING LONDON AND MADRAS PRICES



The close relationship existing between Madras prices and London prices is also revealed by the following table and the graph on the opposite page.

Year.	*London prices in £.*	*Madras prices in Rs.*
1931	11·95	27·6
1932	14·9	35·1
1933	10·95	24·9
1934	9·5	20·9
1935	14·3	35·7
1936	14·55	35·4
1937	14·2	33·2

We may now turn to the manner in which the prices are determined in the Madras and other mofussil markets. But before considering this it is very essential to bear in mind that the whole price structure of groundnut in India is under the firm control of the exporting firms who are the chief buyers. Generally there is very little of competition between them except on rare occasions.

The exporting firms at Madras are informed of the daily price changes and the quantity they should buy by cable from their Home office. The buyers at Madras deduct 5% of the price quotation they receive and from the balance they arrive at they deduct charges for various items such as freight charges, cost of gunnies, shipment, insurance charges; in addition to these a particular percentage is charged again towards establishment. The price secured after making all deductions is then announced. When such an announcement is made the quality also is stipulated. The price quoted by the exporting firms is always for the "pucca" quality. We shall presently see how these firms make the deductions for the "katcha" quality they buy. Before that, the exact way in which price deductions are made by the exporting firms may be noted down.*

* The following calculation has been made on the basis of rates prevailing before the outbreak of the war.

Let us suppose that the price (per ton) quoted by the exporting firms is equal to	..	£11	0	0
Freight per ton and 5 per cent deduction	..	1	12	6
Balance	..	£ 9	7	6

Value of £9-7-6 on that day's exchange rate @ Rs. 13-4-0 per £ = Rs. 130 per ton. Price of one candy = Rs. 31–0–0. From this Rs. 31/– deduct

Cost of gunnies	..	1	0	0
Insurance charges on 3 bags	..	0	6	0
Cost of shipment @ 10 as. per candy	..	0	10	0
Total	..	2	0	0
Balance		29	0	0

From this Rs. 29 a certain percentage is kept towards establishment charges. This is how the price is said to be fixed by the shipping firms in Madras. The sub-agencies in the mofussil are then advised to purchase up to a particular quantity on that price.

The produce that is bought by the sub-agencies is of the katcha quality. Katcha quality means that it is inferior to the quality that is shipped, containing a high percentage of blacks together with dust, touched, shrunken and damaged seeds. It is only when all these are removed and the goods purified, that they come up to a standard suitable for shipment. As already mentioned, the prices quoted by the exporting firms are for the pucca quality and when they buy katcha they are necessarily bound to make deductions for the above mentioned impurities. It is in the strictness with which price deductions are made that the Indian cultivator is hard hit. The following procedure is usually adopted by all the firms in the determination of prices for katcha quality.

As soon as the bags are received by the sub-agencies, they are stored in the store house and only 10% of the number of bags are brought for sample weighment. The bags are weighed with the licensed weighman at Cuddalore because of the stipulations of the Marketing Committee. After deducting the weight of the gunny, the average weight is

calculated which is taken to represent the weight of each bag for the consignment as a whole. Out of this 10% weighed, half is taken out for sampling, i.e., for finding out the impurity content or 'refraction' as it is called. Each bag is poured out and the expert feels the amount of moisture content and examines if the stuff suffers from bad smell. These are instantaneously recorded in a note book. It is necessary to stress that these are processes over which the seller has got no control and over which the buyer's word is final. Especially in feeling the moisture content there are bound to be large differences of opinion between the buyer and the seller but over which the latter has no voice as the process is purely an estimate made by a paid servant of the firm out of experience, with no chances for verification. When the lot is named and the top of each heap flattened, samples are taken with the "Sample Swoop," one from the centre and four from the sides of the flattened heaps. When all the samples are drawn out they are sent to the analysing laboratory for analysis by the expert. The whole thing is poured on the table mixed well so that even a small quantity taken out of it may be a true specimen of the larger quantity to be bought. The seeds are spread out on the table and the surface made even. Now a small quantity of about a fixed weight of say 1,000 grams is drawn with the help of small scoops. There are certain rules as to how these samples are to be drawn but they differ from firm to firm. The quantity thus obtained is sieved and the powder removed. The sieved nuts are afterwards given to analysing chitals for finding out dirt such as stones, shells, husk, sand and the like. All these impurities go by the name of dirt which is mixed with the powder, all of which are weighed and calculated for 100 grams. Out of the remaining quantity, 100 grams is given once again for analysing chitals for sorting the nuts into damaged, shrivelled, touched, nooks, bits, small seeds, etc. When the analysing process is over, the various items are separately weighed and their weights sent to the inspector. The following illustration of the percentage of impurities will be helpful in understanding how the various items are separately recorded and price deductions made for them.

(1) Brown kernels ..	39·6	(5) Small seeds ..	3·9
(2) Nooks ..	4·34	(6) Touched ..	2·87
(3) Bits ..	4·1	(7) Dirt ..	2·24
(4) Damaged ..	4·10	(8) Shrivelled ..	0·64

GROUNDNUT

The contract form stipulates the percentage of impurities allowable. Deductions in prices will be made as per the clauses of the contract form.

The relationship between the prices of katcha and the pucca qualities as well as the percentages of the pucca prices paid to sellers of katcha goods can be seen from the following two tables.

Months.	*Cuddalore market katcha prices.*	*Madras prices.*
1940.		
June	25 10 6	27 12 0
July	21 12 0	23 15 0
August	20 14 7	24 0 9
September	22 12 7	25 3 2
October	22 5 6	24 5 0
November	18 5 0	20 15 0
December	16 12 0	20 4 0

Average Price for Katcha produce as percentage of Pucca quality.
(Taken for 1st week of certain months of 1940, for a few stations)

	7–9–'40	5–10–'40	2–11–'40.	7–12–'40.	4-1-'41.
Cuddalore ..	88	89	89	76	83
Tindivanam ...	96	95	94	89	89
Tirukoilur ..	94	94	90	76	83
Villupuram ..	97	92	90	81	88
Ulundurpet ..	88	91	90	75	84
Vriddhachalam ..	87	92	92	78	84
Chinna Selam ..	91	95	..	..	..
Panruti ..	92	89	..	..	..

The table brings out the important fact that the katcha goods receive a low percentage of pucca prices during the month of December. This is explained generally as being due to the bringing of uncleaned stuff to the market immediately after the harvest is over. It is possible to infer from the same table that when the ryots take some time to cleanse the produce and then bring it to the market they are better rewarded. The absence of such information for a full year makes it impossible for us to find out the best season for the cultivator to dispose of his produce.

Section XII

FINISHED PRODUCTS

It has been shown in the section on export trade that nearly as much as two-thirds of the total production are being retained inside the country while the rest is exported in the form of kernels. Since a substantial portion of the quantity retained is consumed in a raw form, the development of the manufacturing industries of this important raw produce is greatly affected. It may not be an exaggeration to say that oil pressing and other allied industries have scarcely made any headway. The chief among the reasons for this tardy progress are :—Firstly the external demand is for kernels only and this has been the most important factor standing in the way of the development of manufacturing industries. In the south, which is by far the most important groundnut producing area, the use of the oil for edible purposes is greatly limited by the popularity of cocoanut and gingelly oils. The use of the cake also is greatly restricted because of its cost. Still some quantity of oil and cake is being produced in this country and exported as is shown by the following figures.

Export of groundnut oil and cake.

(1000 tons)

	Oil[1]	Cake[2]
1930	0·6	172
1931	1·7	182
1932	2·2	184
1933	4·6	159
1934	1·4	190
1935	2·7	262
1936	4·2	194
1937	9·9	..

1. Vegetable Oils and Oil-seeds, Imperial Economic Committee, 1938.
2. Statistical Abstract for British India.

Even in the days of a great slump in prices, the oil industry will be a profitable concern, unless there be a heavy decline in the demand for cake. When crushed, 2½ candies of groundnut will yield one candy of oil and 1½ candies of cake. The cost of crushing in the hand-press comes to about Rs. 10, the total cost amounting to Rs. 60 when groundnut sells at Rs. 20 per candy. One candy of oil and 1½ candies of cake fetch Rs. 48 and 16 respectively leaving a clear profit of Rs. 4. This is the relationship that may be said to be working out to-day. But on ordinary occasions, greater profits can be expected as cake will sell at a better price. Because of the war the export of cake has been much restricted. Further the export of Madras-made expeller-cake to the markets supplied formerly by the interior has caused a glut in the interior market pushing its prices so low as to leave a very low margin of profit for the oil industry. But for the higher price realised through oil, oil extraction would not have been possible today. It may be noted that while oil extracted through an expeller sells at a premium over oil extracted through a press the expeller-cake is valued less than the cake produced by the press, as the latter contains a higher percentage of oil. It may be also noted that whereas the cost of extraction for the expeller comes to about Rs. 8, it costs as much as Rs. 10 for the press. On the whole, extraction through the expeller offers greater profit than extraction with the aid of the press, as may be seen from the working sheet shown below.

	Cost of 2½ candies of nuts	Labour charges.	Total cost	Selling price of Oil	Selling price of Cake	Total s.p.	Net profit
	Rs.	Rs.	Rs.			Rs.	Rs.
Press:	50+	10	60	1 candy =Rs. 48+	1½ candies cake Rs. 16	64	4
Expeller:	50+	8	58	1 1/16 candies =Rs. 53+	do. Rs. 11	64	6

Oil is extracted in a variety of ways, from the most antiquated to the most modern. Oil extraction by 'chekku' is the common mode adopt-

ed in villages all over the country. In towns and urban areas the press as well as the expeller are used. The plates in this book show the chekku, parts of the press and important sections of the expeller. The press requires much manual labour while the expeller is power driven.

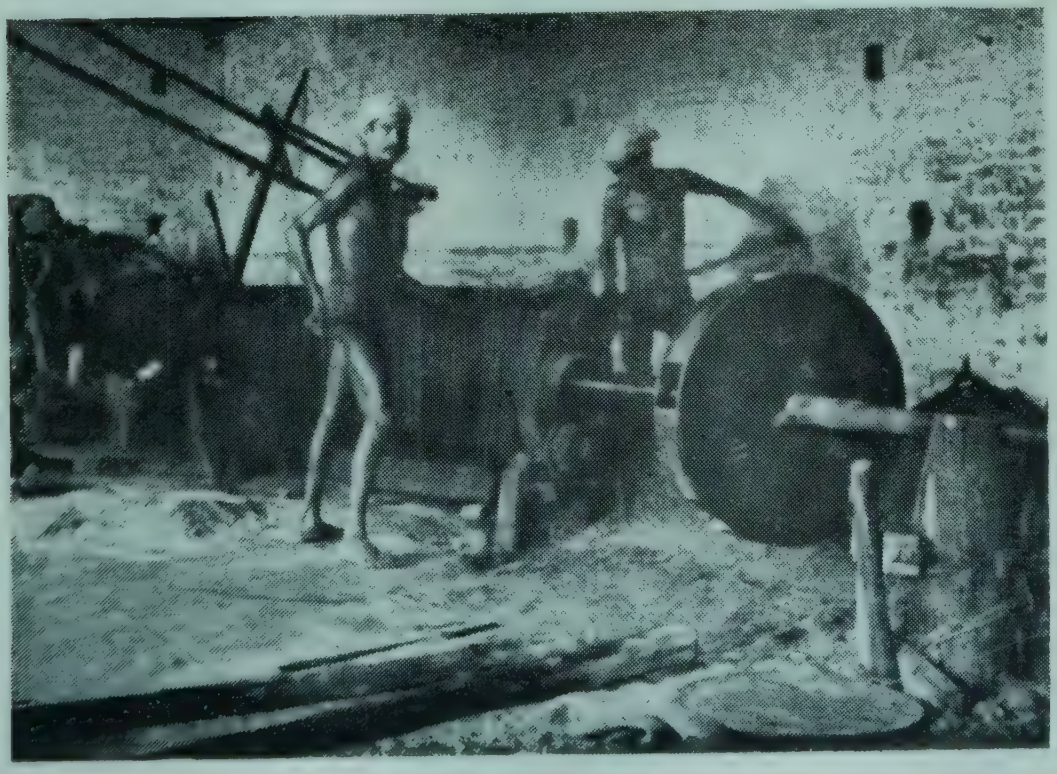
While some progress has been made in the direction of improving the extraction of oil to satisfy the local as well as the limited foreign demand, the refining of vegetable oil is scarcely known in India. If oil is to be useful for industrial purposes, refining is very essential.

There are many promising outlets for the manufacture of groundnut oil of all grades. Besides being an illuminant and a lubricant, it is also greatly used in the soap-making and paint industries. If the oil is hardened into a solid or semi-solid state, there will be a large outlet for it in the textile industry as it can replace tallow now used in that industry. It has been recently found out that vegetable oils along with mineral oils make excellent compound lubricants. There is also a new demand for groundnut oil in the manufacture of ghee and butter substitutes. The manufacture of margarine which has not been attempted so far in India offers another scope for an industrial adventure. Refined and deodorised groundnut oil is also used for cooking. It has to be admitted that the use of groundnut oil for soap manufacture is limited as it yields only soft soaps while the case for glycerine extraction offers a lucrative avenue of industrial activity. Next to the cocoanut oil, groundnut oil contains the largest percentage of glycerine. For sometime there was a somewhat crude glycerine plant attached to the Kerala Soap Institute working at full capacity during the last war. But the high cost of evaporating oil and the fall in the price of glycerine in later years sealed the fate of the plant. At present there is a considerable demand for glycerine, and already some premier oil concerns have started working glycerine plants for the extraction of crude as well as the distilled qualities. The Tata Oil Mills in Cochin have succeeded in the operation of their glycerine plant and it is said that they are contemplating some expansion. In Mysore also the Government Soap factory has established one. The wide scope that this industry offers seems to have been fully understood in Calcutta where there is a perceptibly brisk activity in starting new ventures. Full advantage may be taken of the fact that cordite factories with their demand for this product would be regular customers.

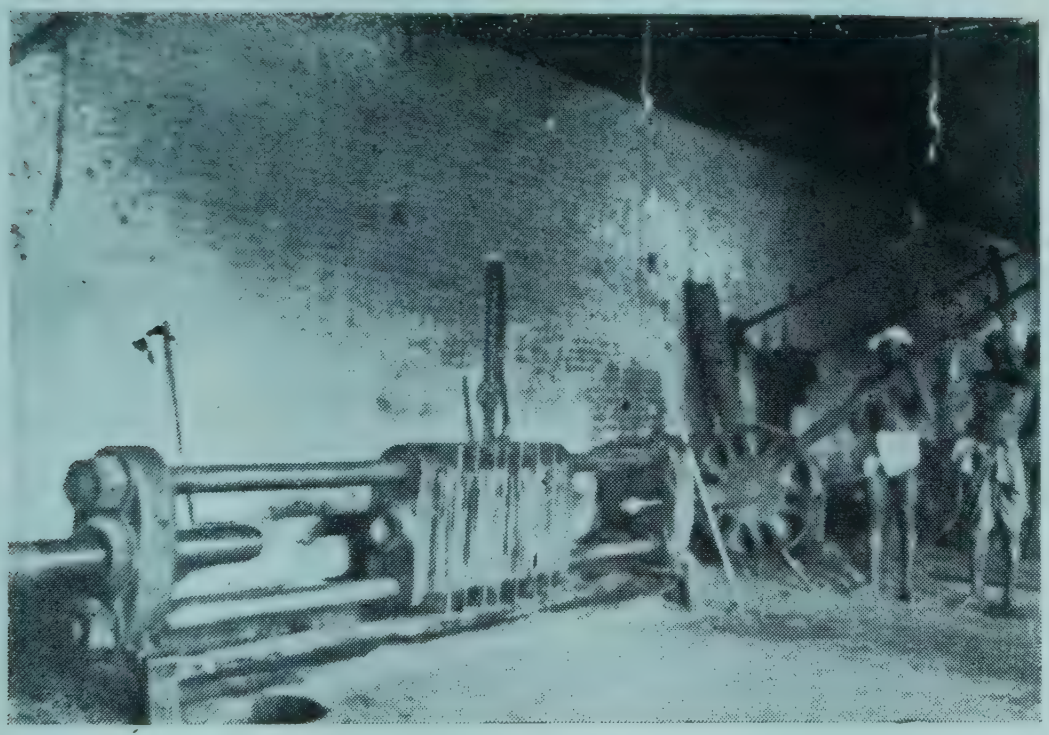
Medically vitaminized groundnut oil containing vitamins A and D is recommended as a substitute for cod-liver oil.

COUNTRY "CHEKKU"

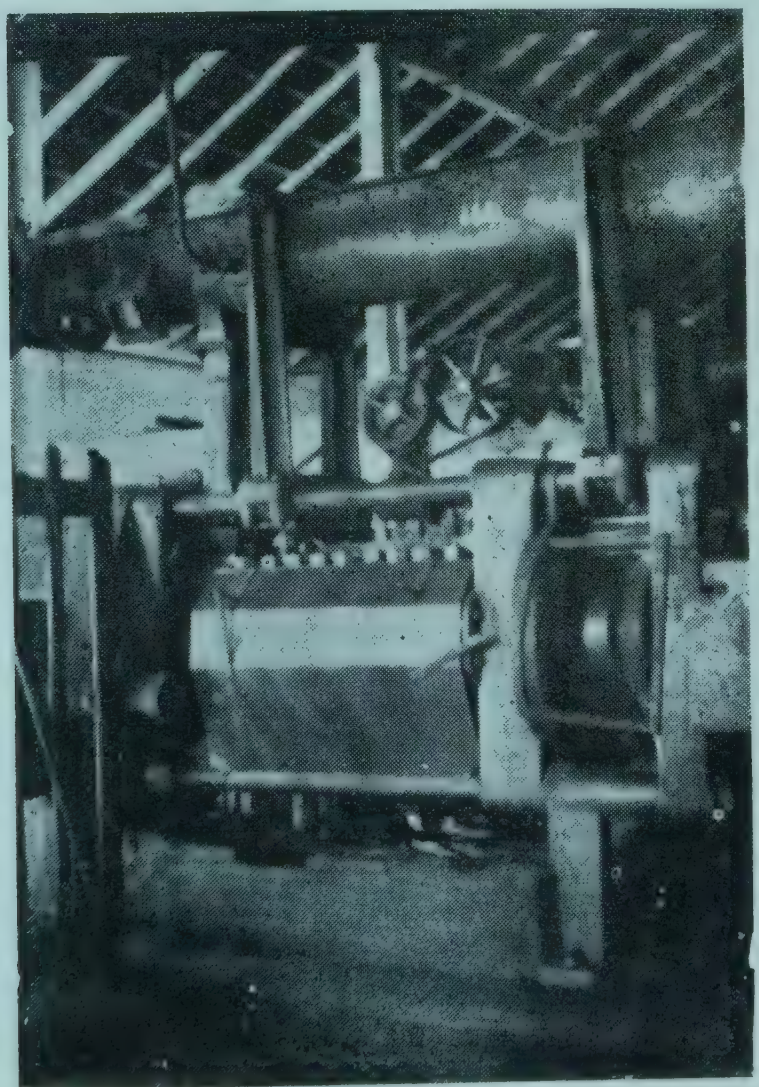
THE OIL-PRESS: WORKING SECTION



THE PRESS : PRESSING SECTION



THE EXPELLER



THE EXPELLER AND FILTER

THE SHIPPING OF GROUNDNUT : THE WHARF AT CUDDALORE, O.T.

The use of groundnut meal with oil content of 5 to 8 per cent has been advocated as a substitute for wheat flour in the manufacture of bread and biscuits. Of all the known oil-cakes, the groundnut cake serves as an excellent cattle food, as it contains the highest amount of proteins. Moreover, these proteins are more easily digested than those of other cakes. "The cakes from non-decorticated nuts contain 5·35 per cent of Nitrogen and 0·9 per cent of phosphoric acid; cakes from decorticated nuts contain 7·9 per cent of nitrogen and 1·35 per cent of phosphoric acid." The cakes from damaged and mouldy nuts are used as manure.

From the husk of the groundnut can be prepared Furfuraldehyde, which is utilized in the synthesis of carbohydrates. Besides, the carbonized husk may be used in the manufacture of activated carbon.

In view of these uses to which the groundnut products can be put, is it not pertinant to ask why the oil and allied industries should not be started especially at a time when the "surplus commodity" makes the raw produce available at a cheap rate?

Section XIII

CONCLUSION

The effect of the present war on the Indian groundnut trade has been dealt with at some length in the sections on export trade and prices. It was shown how the Continental markets have a major share in the export trade of Indian groundnut and how in the year in which the war broke out, there was an extraordinary demand in the off-takings of Continental countries. These together with other causes resulted in an increase in prices in the first few months of the war. The aim of the present section is to examine the effects of all these factors and to assess the usefulness and practicability of the schemes that have been suggested to solve the difficulties caused to the trade.

With the expansion of the trade in 1938-39 and the increase in prices running up to the first quarter of the next year, the impact of the war on groundnut trade was great enough to exercise some influence in the cultivation of the next year's crop. In Madras alone the area under cultivation of groundnut increased from 2,863,200 acres to 3,142,000 acres for 1940, according to the latest forecast issued by the Government of Madras. In the natural course of events, the increased production of the crop should have gone to all the markets that were importing groundnut in the previous year; but the tightening of the blockade, the fall of France, the lack of shipping space and many other facts, which need no repetition, all changed the complexion of the war so much, that the trade was threatened with serious repercussions. The decline in the foreign demand resulted in pushing prices down ; and this tendency was greatly accelerated by the anxiety of those merchants, who had stored some goods in expectation of better prices, to dispose of the stock and thereby prevent themselves from utter ruin. Prices began to swing down ; and from Rs. 33 in May it descended by steep gradations to Rs. 20 in November and December when the heavy production of the increased acreage made itself felt. Thus one disaster following close on the heels of another, resulted in a serious glut in the Indian market, tending to force prices down to the rock bottom level of Rs. 20 in December, 1940. Exporting firms felt the serious shrinkage in markets and lack of sufficient shipping space ; merchants found the demand quite unattract-

ive: and the cultivators had to face the difficulty of securing prices that would compensate the cost of cultivation, for while the cost of cultivation was Rs. 20 for even an unirrigated crop, they received a price of about Rs. 16 only incurring a loss of about Rs. 4 per acre.

This serious situation could have been averted to some extent if groundnut could be stored in suitable warehouses. But groundnut cannot be stored for a long time in kernels without serious loss to quality and quantity; and secondly there was no warehousing system worth the name.

It was under such circumstances that the Government of India became conscious of the seriousness of the situation and tried their best to avert the catastrophe. Quickly realising the situation, they sought the help of the various Chambers of Commerce in the country with a view to devising possible remedial measures to deal with the problem of 'surplus commodities.' The Economic Adviser to the Government of India also toured important producing centres with a view to getting first-hand knowledge of the situation.

Dr. T. E. Gregory, the Economic Adviser, came to the conclusion that the remedy equal to the malady was the adoption of a policy of restricting the cultivation of groundnut crop; but even if the scheme had been put into force, it would have required all the power in the hands of the Government to push it through and, even then, success would have been doubtful.

The Indian agriculturist is strongly conservative in outlook with no desire to deviate from the methods and vocations handed down to him by generations of his fore-fathers and unwilling at the risk of some loss to break open new ground. That this is not an exaggeration may be understood from his hesitation to benefit even by the advanced methods of cultivation and manuring propaganda of the agricultural department. Any attempt to make him change his ways in preference to modern methods, is foredoomed to failure.

Again it is not all cultivators that could abandon the crop. Even in the small survey conducted by us we came across a number of agriculturists with a very small acreage devoted to the cultivation of groundnut. For them life was dependent on its cultivation. A just scheme of restrictionism should have provided for exemption of such people and

if exemptions are granted on the various scores of financial inability, soil and climatic conditions and other factors enumerated above, the scheme will defeat its own aim.

There was again the possibility that agriculturists would not respect the scheme. For aiming as it does at an increase in prices, if the restriction scheme had been successful, the increased price would itself be a temptation for the illiterate agriculturist to take to groundnut. Under such circumstances unless the scheme is enforced with penal measures, its success is highly problematical; but penal measures are not advisable.

The Delhi conference wherein the representatives of the Government of India and those of the Governments of Madras, Bombay and Hyderabad, met to consider the groundnut situation and device suitable remedies for the difficulties, happily came to the conclusion that it was not practicable to enforce the restriction of output by compulsion, although it favoured the policy of carrying on propaganda directed towards such restriction. The conference was of the view that the low prices prevalent would themselves act as an effective deterrant. Though the Delhi conference did not approve of the direct policy of restrictionism, the Government evolved a modest but careful plan of restrictionism which suffers in a greater or lesser measure from all the defects and difficulties of the original proposal. This new proposal was the outcome of an anomalous situation that arise in the meantime.

In view of the fact that a greater number of foreign markets had been shut out on account of the war, and out of sympathy with the demands of the Indian groundnut trade, it was decided that the British Ministry should undertake to buy substantial quantities of the supplies available in the market at a certain minimum price either as oil or as kernels or as unshelled seeds. The Government of India were able to fix the minimum price at £10 per ton with the Food Ministry from September last and thus were able to satisfy, partially at least, the claims of the Indian groundnut trade. But the purchases made by the Ministry of Food were of such a small quantity, that they did not effectively relieve the glut in the Indian market. With the coming of the new crop, prices went down so low that there was a large difference in the price prevailing in the internal market and the guaranteed price received by the shippers. The 'katcha' quality was sold for about Rs. 16 whereas the shipping firms were receiving about Rs. 27 for the 'pucca' exported. Even allow-

ing for the difference in quotation as to quality, a sum of Rs. 3 or 4, still a huge profit is made by the exporting firms. Thus, in spite of the aim of the Food Ministry to help him, the Indian agriculturist has not been benefitted; for if allowances are made for railway freight, handling charges, market dues, decorticating expenses, interest, commission and so on, he ultimately receives only Rs. 12 to Rs. 13 per candy. On the other hand, it was the organised middlemen, viz., exporters who exploited the situation.

The Government of India, which observed this anomalous condition prevailing, thought of a way to get over the awkward situation and put forward a scheme of rebates. It was proposed to collect from shippers selling to the British Ministry of Food at the contract prices, 15s. to 20s. according to the port from which the export was made, and to dispose of the fund so collected amongst the agriculturists. The Government's decision to pay growers was sound on principle; for even if they had insisted upon the exporting firms paying the prices that the Food Ministry had fixed, on account of the fact that the off-takings were only very small compared to total output, "the result would have been in effect nothing but an unfair and fortuitous advantage to a small body of growers over the greater number of their brother producers whose product passed into the market for local consumption."

Even this scheme of subsidy would not be an effective remedy for overproduction, unless it is related to some measure of restriction of cultivation. Hence, it was suggested that the fund made available as rebates, supplemented by contributions from interested Provinces and States should be utilised to compensate such producers as are willing to submit to restriction.

The scheme of subsidy may have the approval of a certain section of cultivators from the broader point of view of benefit to the country; but one cannot feel happy over it. It is our earnest opinion that any policy of restrictionism is quite unsuited to a country like ours where the *per capita* income is lamentably low. The way to prosperity is not by reducing the total production of goods but by devising means of increasing and utilizing them in all possible ways.

There are only two ways out of this problem, the one being the resort to alternate crops and the other the utilisation of the surplus goods internally. There are, however, difficulties in raising alternate crops.

Apart from the conservatism of the cultivator, the soil itself seems greatly to hinder the growth of alternate crops. Certain soils are fit only for the cultivation of certain crops and such soils cannot be fruitfully turned to other uses. The soil required for the cultivation of groundnut is of such a nature that it is hardly suited to anything except a restricted number of other commercial crops, such as jowar and cotton. In Cuddalore, where many of the cultivators have been willing to change over for Cambodia cotton for a long time past, farmers have expressed the view that the soil has been causing some difficulties.

Even if this difficulty is overcome in suitable ways, it will not improve the situation. For "this is a time when almost all crops are in the same unhappy position of requiring to find a buyer; and it is hard to devise an entirely new crop which can replace an existing crop to any extent whatsoever and fetch a return which is satisfactory. On the other hand, if it is only adjustment of present crops, if groundnut is replaced by millet, or cotton is replaced by tobacco and so on, it would only convert a groundnut problem into a tobacco problem and there can be no effectual relief to the country as a whole."*

Thus the easiest and the best way of utilising surplus commodities is to increase the internal demand. And this can be done either by increasing the consumption of the raw commodity as such or by converting the surplus into manufactured products. The latter is the more desirable course as it would open out a large field of industrial activity and also establish a consumer for the Indian produce near at hand. A failure to solve this problem this way would indicate only a failure to understand the way to national progress. It cannot be denied that India can never see a more opportune moment for developing her industries than the present one. To miss this time is to miss a golden opportunity. The ways in which groundnut could be utilised for other purposes have been dealt with in the section on finished products and hence need not be repeated here.

A few other problems of groundnut trade not solely due to war but greatly responsible for the prosperity of the cultivator as well as for the Indian traders, may be emphasised here. Traders complain that the refraction analysis is strict and there is much dis-

* Southern India Chamber of Commerce reply to Government communication, Dec. 1940, p. 342.

parity between the percentage of refraction enjoyed by exporting firms in the foreign markets and the percentage allowed to Indian merchants. There is also another cry that while the Bombay agencies of the exporting firms allow a greater percentage of refraction, the agencies in South India do not show the same consideration; and the disparity in the percentage of refraction allowed gives rise to a deflection of trade. Regarding the first disparity, it is said that while the exporting firms enjoy nearly 4% of refraction with the Continental and foreign buyers, they extend only 2% of refraction to Indian traders. Though it cannot be ascertained how far this representation is true, it is needless to stress that the refraction basis needs to be carefully revised in view of a similar disparity known to be prevalent in the linseed trade according to the Marketing Report of Linseed. Further, the contract forms used are so one-sided that they call for the earliest revision. The necessity to carry these reforms are urgent and essential, for it is only when the conditions of the traders are bettered they may be able to pass on any benefit to millions of agriculturists now engaged in the cultivation of the crop.

Even regarding the analysing process itself, various reforms have to be carried out. Much ill-will prevails between the sellers and buyers regarding the honesty of the process carried by the latter. The way out of it consists in entrusting the work to an impartial board. This can be achieved by the Government employing a Marketing Analyst in every centre under the auspices of the Marketing Committee functioning there, and making his decision binding on both parties. If this is not possible the traders of each area may be organised by the Marketing Committee and made to establish a parallel analysing laboratory like the one maintained by the exporting firm so that the samples may be analysed here also. Then they could insist on the buyer accepting the average percentage of the two analyses. This would be a fair method and can be easily achieved by the Marketing Committee. The Marketing Committee should never forget that it is as much their duty to be of service to the traders as they are to the agriculturist, for it is then only, as we said before, that lasting benefit can be conferred on the agriculturist.

It is noteworthy that there are not any Indian exporting firms in Cuddalore. Hence, the foreign exporting firms exercise a monopolistic control. The difficulties of starting an Indian con-

cern are tremendous; not only has the new concern to face the terrific competition of the established ones, but it has necessarily to be a small one in the beginning and will accordingly be unable to deal directly with the more than 40 countries to which the produce from Cuddalore is exported. To remedy the present situation, we would suggest the starting of a co–operative sellers' organisation, somewhat like the now defunct Central Sales Society, and make the exporting firms accept the society as their agent in that area. In that case, much of the profit now going to the foreign firms in the way of refraction and direct reduction in prices, can be made to reach the poor peasant.

In conclusion, it may be said that the problem of the cultivation, marketing and utilization of groundnut bristles with many difficulties; and these difficulties have been critically accentuated by the war. But it should be conceded that the Commerce Department of the Government of India have been earnestly attempting to bring relief to the cultivator as much as possible. Presiding over the Export Advisory Council on May 14, 1941, the Commerce Member to the Government of India, announced that His Majesty's Government has consented to credit to the Indian Government a fund equivalent to £ 100,000 being the difference between the contract price and the actual price of groundnut during the period from January 12th to the end of April, 1941. However, it may be said that there is need for a more comprehensive plan to offer adequate facilities to growers to introduce alternate crops and enable them to get a fair-price for their produce, to provide improved marketing facilities and lastly to give ample scope for the development of such industries as will help to absorb the raw product.

APPENDICES

APPENDIX A

Table I

Estimated Acreage of Groundnut in the Principal Producing Countries*

(Millions of acres)

Countries	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
EMPIRE COUNTRIES														
India ...	2·9	4·0	4·3	5·4	6·4	5·7	6·4	5·3	6·8	7·6	5·1	5·1	6·6	8·6
Burma ...	...	...	...	...	...	...	0·6	0·4	0·5	0·6	0·6	0·6	0·7	0·8
Nigeria ...	...	...	...	...	...	...	0·6	0·8	...	...	...	...	...	...
Tanganyika ...	...	...	...	...	...	...	0·065	0·08	0·1	0·1	0·1	0·1	0·1	0·2
FOREIGN COUNTRIES														
China ...	...	...	...	...	...	...	2·3	...	...	3·8	3·5	3·3	3·4	3·6
Senegal ...	1·2	1·2	1·5	1·2	1·3	1·6	1·7	1·5	1·6	1·6	1·6	1·7	1·6	...
United States ...	1·2	1·0	0·8	1·1	1·2	1·4	1·1	1·4	1·6	1·4	1·6	1·7	1·7	1·6
Netherlands East Indies..	0·5	0·5	0·5	0·5	0·6	0·5	0·6	0·5	0·5	0·5	0·5	0·4	0·5	0·5
French Sudan ...	...	...	...	...	...	...	0·2	0·3	·4	0·3	0·4	0·4	0·4	...
Ivory Coast (French) ...	...	...	...	...	...	...	0·06	0·1	0·04	0·2	0·2	0·3	0·3	...
Belgian Congo ...	...	...	...	...	...	...	0·3	0·1	0·2	0·2	...	...	...	...
Cameroons (French) ...	...	...	...	...	...	...	0·1	0·1	0·1	0·1	0·1	0·2	0·2	...
Argentina ...	0·1	0·1	0.1	0·1	0·1	0·1	0·1	0·1	0·2	0·2	0·1	0·2	0·2	...
Kwantung ...	...	...	...	...	...	...	0·09	0·08	0·08	0·08	0·09	0·09	0.09	...
French Equatorial Africa ...	...	...	...	...	...	...	0·03	0·03	0·03	0·03	0·06	0·08	...	...
Formosa ...	...	...	...	...	...	...	0·06	0·06	0·06	0·07	0·07	0·07	...	...

* Compiled from " Survey of Oil-seeds and Vegetable oils," Vol. III.

Table II

Area under Groundnut crop cultivated in each Province *

Provinces	1920-21	1921-22	1922-23	1923-24	1924-25	1925-26	1926-27	1927-28	1928-29
Ajmer-Merwara ...	...	...	...	...	...	...	...	...	...
Assam ...	...	...	...	...	...	...	...	...	...
Bengal ...	100	300	500	...	400	400	600	800	500
Bihar and Orissa ...	200	200	200	200	200	200	200	200	300
Bombay and Sind ...	204,675	272,847	329,679	359,404	344,404	595,588	602,408	740,316	999,823
Burma, Upper and lower ...	302,955	305,789	332,477	390,129	461,856	498,587	523,118	540,071	598,870
C. P. and Berar ...	9,624	15,352	18,024	22,934	30,466	59,686	44,020	70,073	103,099
Coorg ...	...	...	...	...	...	...	...	...	...
Delhi ...	...	...	...	...	...	...	...	...	...
Madras ...	1,599,738	1,459,122	1,754,334	1,807,353	1,904,119	2,598,609	2,680,156	3,336,536	3,679,349
N. W. F. Province...	...	...	...	...	...	...	...	...	...
Punjab ...	...	...	...	...	...	...	...	...	...
United Provinces ...	6670	7589	6729	6322	13,018	14410	12,984	12,245	19,558
Total including Manpur Pargana ...	2,123,962	2,061,199	2,441,943	2,586,342	2,754,463	3,767,480	3,863,486	4,700,241	5,401,499

* *Vide* " Agricultural Statistics of India " Vol. I.

Table II—*Continued*

Provinces	1929-30	1930-31	1931-32	1932-33	1933-34	1934-35	1935-36	1936-37
Ajmer-Merwara ...	...	632	...	...	...	...	...	...
Assam ...	...	...	...	...	...	...	...	...
Bengal ...	500	700	300	700	1800	400	3100	2700
Bihar ...	1200	1200	1200	1200	1200	1200	...	...
Bombay and Sind ...	1,067,758	999,077	989,224	1,194,639	1,291,776	862,341	891,671	987,046
Burma ...	570,610	564,523	408,309	521,850	640,188	624,558	660,141	764,600
C. P. and Berar ...	139,088	147,766	164,333	185,296	194,138	148,561	133,700	148,614
Coorg ...	...	...	...	...	...	...	...	...
Delhi ...	...	...	...	...	...	...	...	...
Madras ...	3,209,315	3,575,157	2,635,427	3,516,679	3,779,365	2,350,934	2,519,965	3,495,023
N. W. F. Province ...	...	...	...	...	...	...	...	...
Punjab ...	...	...	...	...	...	...	...	...
United Provinces ...	23,922	21,399	27,214	47,609	40,424	55,830	87,947	106,945
Orissa ...	...	...	...	...	...	...	10,207	11,943
Sind ...	...	...	...	...	...	...	14	10
Total ...	5,012,393	5,310,454	4,226,008	5,467,973	5,948,891	4,043,824	4,306,745	5,516,881

[*N. B.* Bihar means :—Bihar & Orissa in 1930—31—32—33—34 and 35.]

Table III

Acreage under Groundnut in the Madras Presidency

(Compiled from Season and Crop Report)

Year	Anantapur	Cuddapah	Godavari	Krishna	South Arcot	Chingelput
1914–15	262764	160577	57	3356	410123	44541
15–16	159338	100805	44	2667	29?035	21929
16–17	299903	201633	182	1440	355854	27516
17–18	168857	62944	114	955	332791	25296
18–19	40765	36106	65	807	303464	23792
19–20	68577	103407	24	1021	335350	22690
20–21	118370	144298	16	2091	438793	32590
21–22	108905	130094	11	2105	386659	25035
22–23	129109	194925	25	12832	384614	25395
23–24	158986	170378	44	13187	372893	30071
24–25	105360	137539	4384	7220	421969	34097
25–26	172?98	223598	8300	8070	465954	52129
26–27	255903	251366	5448	8503	396841	50279
27–28	349455	270264	5359	15101	453282	56155
28–29	425439	272134	4730	26556	482978	58611
29–30	211011	163593	3034	30035	455721	62160
30–31	349557	235673	4317	52441	458750	50948
31–32	247702	183390	3264	43755	337745	27725
32–33	343535	264805	3856	70786	335?35	33840
33–34	446507	229478	6612	109324	381960	38956
34–35	254055	126276	5414	92131	289794	33601
35–36	180308	117429	11080	102473	374869	41416
36–37	315639	202929	22592	160237	429814	65801
37–38	446448	287336	56136	208231	471274	808?8
38–39	318069	184912	36103	162641	425725	71065

Table III—*Continued*

Year	Ganjam	Vizagapatam	North Arcot	Chittoor	Trichy	Madura	Tinnevelly	Tanjore
1914–15	...	32045	22926	30333	97943	67557	311	77501
15–16	...	24533	125671	23011	76014	34025	218	64912
16–17	...	29302	184577	23943	92822	50554	313	74727
17–18	...	27940	178408	27925	95187	53043	528	77781
18–19	...	34405	180165	27799	89243	34602	621	68305
19–20	...	35387	146889	28266	93190	43287	1179	74036
20–21	22216	38155	221705	38068	88176	68643	3003	87092
21–22	20739	43219	208779	3353	90424	45315	2197	81962
22–23	24948	50089	232679	43385	103198	62721	2339	8 743
23–24	23252	59903	213275	49794	89026	48151	2347	83244
24–25	30740	69514	255970	56783	92416	49211	2575	83473
25–26	35088	89507	363845	88312	114702	53015	3909	95096
26–27	37017	91399	363820	108852	94142	49784	3481	90232
27–28	43626	88494	460984	138078	115307	70574	4368	91701
28–29	40714	96317	460772	136861	110971	76894	4641	90643
29–30	49427	112066	443098	120186	118790	91047	4468	91278
30–31	50893	133623	372030	84355	105970	101814	5685	86666
31–32	44218	131025	247034	65405	82558	55540	5257	65568
32–33	52054	117947	305127	106634	85641	92323	7203	67100
33–34	49985	126352	295035	113826	63300	129310	12887	65061
34–35	51034	126307	218659	77646	84723	60995	10347	49610
35–36	5339	170349	275960	96493	114782	64383	8613	55069
36–37	...	183584	348560	141535	116877	87749	10707	62817
37–38	...	205122	439928	201888	133634	161091	22118	68892
38–39	...	220507	402333	174673	133400	140325	19178	63162

Table III—*Continued*

Year	Coimbatore	Salem	Guntur	Bellary	Kurnool	Nellore	Ramnad	Malabar	South Canara
1914-15	82958	104547	5450	80716	132346	...	...	...	...
15-16	43671	28549	5667	29783	57041	...	...	...	...
16-17	90262	62953	5207	80118	170928	...	...	...	...
17-18	98273	75843	3628	54495	77593	...	...	...	...
18-19	41176	48524	2556	6923	12462	...	...	...	...
19-20	46841	51995	3729	5464	29019	...	...	...	...
20-21	78828	88945	6464	19673	66796	...	...	...	...
21-22	78623	66085	8888	19035	80043	...	...	...	...
22-23	108524	86587	12832	37561	137033	...	...	...	...
23-24	102567	99377	13187	64065	199988	...	...	...	...
24-25	108408	82602	36084	61522	2-9972	...	...	...	...
25-26	138679	130423	61171	107192	350109	...	...	...	...
26-27	125676	93787	77694	180623	357853	...	...	...	...
27-28	143206	143101	137772	279059	423664	...	...	...	...
28-29	171964	156029	221862	315603	478-89	...	...	...	...
29-30	174896	173884	238977	282275	328467	...	...	...	...
30-31	184747	152009	304834	332068	442349	13819	46507	2921	2
31-32	126716	82398	205281	237428	396321	7860	37166	2067	4
32-33	166632	128305	318258	340352	614626	12116	49073	1022	9
33-34	200049	151480	352879	416641	480097	16595	58854	1496	5
34-35	134302	72854	184905	158479	279385	6637	33178	1135	11
35-36	125100	97895	208367	109811	316584	11242	34828	898	15
36-37	141988	137820	305838	229899	468195	18141	40895	3393	13
37-38	200573	192792	417567	376724	591918	— (a)	...	...	...
38-39	189442	161109	313216	247894	410864	32452	59563	4930	25

(a)=not available.

Table IV

Percentage of Area under Groundnut to the Total Area Sown * (In Madras Presidency)

		1930–31	1931–32	1932–33	1933–34	1934–35	1935–36	1936–37	1937–38	1938–39
Vizagapatam	...	4	4	4	4	4	8	8	...	10
Guntur	...	12	9	13	14	8	9	12	...	13
Kurnool	...	21	18	28	22	13	15	22	...	19
Bellary	...	13	9	13	17	6	5	9	...	9
Anantapur	...	17	13	16	21	14	9	16	...	15
Cuddapah	...	20	16	24	20	11	10	18	...	16
South Arcot	...	29	22	22	25	19	24	28	...	28
Chittoor	...	9	8	13	13	9	11	16	...	19
North Arcot	...	25	18	21	21	16	19	25	...	29
Salem	...	8	4	7	9	4	5	7	...	9
Coimbatore	...	8	6	7	9	6	6	7	...	10
Trichinopoly	...	7	6	6	6	6	8	8	...	9
Tanjore	...	6	4	4	4	3	4	4	...	4
Madura	...	7	4	7	9	5	5	6	...	10
Presidency	...	9	7	9	9·7	6·3	6·9	9·5	...	10·5

* *Vide* "Season & Crop Report of Madras Province"

Table V

Estimated Production of Groundnut in the Principal producing countries *

(undecorticated, in millions of tons)

	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
India ...	1·4	1·8	1·8	2·4	2·8	2·4	2·5	2·1	2·8	3·1	1·7	2·1	2·7	3·2
Burma ...	...	...	...	...	...	...	0·1	0·1	0·1	0·1	0·1	0·1	0·1	0·2
Nigeria ...	...	...	...	...	...	...	0·1	0·2	0·2	0·2	0·3	0·2	0·2	0·4
Gambia ...	...	...	...	...	...	...	·07	0·06	·03	0·06	0·08	0·03	0·05	0·05
Tanganyika ...	...	...	...	...	...	...	0·02	0·03	0·02	0·03	0·02	0·03	0·03	0·03
China ...	...	...	...	...	...	...	...	...	...	2·9	2·6	2·2	2·5	3·0
Senegal ...	0·4	0·4	0·4	0·5	0·5	0·5	0·5	0·1	0·4	0·5	0·4	0·5	0.5	...
U. S. A. ...	0·3	0·3	0·3	0·4	0·4	0·4	0·3	0·4	0·4	0·4	0·4	0·5	0·5	0·5
East Indies ...	0·2	0·2	0·2	0·2	0·2	0·2	0·2	0·1	0·2	0·2	0·2	0·2	0·2	...
Argentina ...	...	0·1	0·1	0.1	0·1	0·1	0·06	0·05	0·07	0·1	0·09	0·1	0·07	...

* *Vide* Vegetable oils and oil-seeds, Vol. III.

Table VI

Yield of Groundnut in Provinces *

(in Thousand tons)

	1919–20	1920–21	1921–22	1922–23	1923–24	1924–25	1925–26	1926–27	1927–28	1928–29
Madras ...	569	740	678	823	744	948	1264	1207	1671	1830
Bombay (including Indian States) ...	151	167	177	287	213	361	549	649	860	1066
Burma ...	102	115	95	110	115	165	165	165	145	160
Hyderabad ...	(a)	(a)	9	16	12	11	21	25	42	63
Total ...	822	1022	959	1236	1084	1485	1999	2046	2718	3119

(a)=not available.

* *Vide* Estimate of Acreage and Yield of Principal crops in British India.

Table VI—*Continued*

(In Thousand tons)

	1929-30	1930-31	1931-32	1932-33	1933-34	1934-35	1935-36	1936-37	1937-38	1938-39
BRITISH PROVINCES.										
Bombay ...	426	487	498	579	643	375	418	407	523	556
C. P. & Berar ...	...	(a)	33	45	53	38	35	46	58	74
Madras ...	1522	1765	1234	1729	1777	920	1202	1657	2059	1613
Orissa ...	...	...	...	...	...	...	...	...	(a)	7
Total Br. Provinces ...	1948	2258	1765	2353	2473	1333	1655	2110	2640	2250
INDIAN STATES.										
Bombay States ...	87	175	173	173	263	156	144	252	348	368
Hyderabad ...	145	165	213	320	374	224	287	316	476	537
Mysore ...	...	...	...	(a)	76	27	28	36	37	41
Total Indian States ...	232	340	386	493	713	407	459	604	861	946
Grand Total ...	2180	2592	2151	2846	3186	1740	2114	2714	3501	3196

(a)=not available.

Table VII

Yield per acre of Groundnut in each province * (In lbs.)

	1919–20	1920–21	1921–22	1922–23	1923–24	1924–25	1925–26	1926–27	1927–28	1928–29
Madras ...	1114	1036	1041	1051	922	1115	1089	1009	1122	1114
Bombay ...	2088	1670	1778	1752	1193	2100	1795	1788	1811	1808
Burma ...	816	850	695	742	661	800	741	707	601	635
Hyderabad (b) ...	(c)	(c)	129	199	132	184	248	184	194	217
Average ...	1161	1076	1002	1052	867	1153	1127	1061	1122	1124

(b) = The low out-turn is due to the crops being sown in dry lands.

(c) = Not available.

* *Vide* "Estimate of Acreage and Yield of Crops," 1928-29.

Table VII—*Continued*

Yield per acre of Groundnut in each province * (nuts in shell in lbs.)

	1929-30	1930-31	1931-32	1932-33	1933-34	1934-35	1935-36	1936-37	1937-38	1938-39
PROVINCES & STATES.										
Bombay ...	893	1092	1128	1108	1115	974	1050	924	872	907
C. P. and Berar ...	...	(c)	451	545	612	571	585	692	580	603
Coorg ...	...	...	...	...	...	...	...	...	...	...
Madras ...	1062	1107	1107	1101	1058	877	1068	1062	990	958
Orissa ...	...	...	...	...	...	...	...	...	(c)	825
Average for British Provinces ...	1020	1104 (e)	1044	1076	1052	888	1045	1021	950 (e)	927
INDIAN STATES.										
Bombay States ...	694	649	748	659	863	534	796	641	763	651
Cochin ...	...	...	...	...	...	...	...	...	...	...
Hyderabad (b) ...	525	535	616	641	605	522	607	742	741	791
Mysore ...	...	...	...	(c)	70	371	335	407	419	429
Travancore ...	...	...	...	...	...	...	...	...	...	...
Average Indian States.. ...	577	588	669	647 (f)	688	512	623	666	726	706
Average India ...	943	990 (e)	948	965 (f)	941	758	911	912	883	848

(b) = The low out-turn is due to the crop being sown in dry lands.
(c) = Excluding C. P. & Berar.
(e) = ,, ,, Orissa.
(f) = ,, ,, Mysore.
* *Vide* Estimate of Acreage and Yield of Principal Crops in British India. (1938-39).

Table VIII

Warehouses (Progress Statement)

WAREHOUSE.	Date of opening	Co-operative year ending	Quantity of Groundnut Sold		Value of sale produce	Commission Collected
			Candies	lbs.	Rs.	Rs.
Tirukoilur ...	6—1—1933	30-6-1933	828	353	21,227	207
		30-6-1934	647	248	12,283	162
		30-6-1935	1528	154	47,780	384
		30-6-1936	1471	437	46,039	368
		30-6-1937	2371	369	80,563	593
		30-6-1938	1982	375	48,740	496
		30-6-1939	3436	372	76,046	860
		30-9-1939	655	441	16,701	164
Cuddalore ...	8-12-1932	30-6-1933	137	67	3,507	47
		30-6-1934	1509	24	28,180	560
		30-6-1935	2610	130	64,975	959
		30-6-1936	2238	104	72,849	831
		30-6-1937	3722	52	1,29,302	1404
		30-6-1938	2038	11	55,594	789
		30-6-1939	999	400	66,074	1071
		30-9-1939	320	328	8,055	118
Vriddhachalam ...	14-12-1932	30-6-1933	230	149	6,083	58
		30-6-1934	709	303	13,798	181
		30-6-1935	3662	154	1,16,398	976
		30-6-1936	4930	174	1,56,470	1184
		30-6-1937	5731	217	1,95,795	1345
		30-6-1938	3501	343	84,858	878
		30-6-1939	6196	240	1,41,282	1554
		30-9-1939	740	241	19,317	270
Villupuram ...	19-11-1936	30-6-1938	334	247	7,678	84
		30-6-1939	4592	395	1,13,662	1407
		30-9-1939	1607	303	40,748	481

The above table clearly recounts to the work done by the Warehouses.

Table IX

Total Exports of Groundnut from all ports in India (In Thousand Tons)

	British Ports	Portuguese	French Ports	Kathiawar Ports	Total Exports
1928–29	788	184	80	...	1052
1929–30	714	146	97	...	957
1930–31	601	165	70	...	836
1931–32	472	90	37	10	709
1932–33	433	48	25	30	536
1933–34	547	172	40	38	797
1934–35	511	34	57	57	659
1935–36	413	58	46	48	565
1936–37	740	58	75	54	927

Table X

Distribution of Exports of Groundnut—Foreign countries

	1931-32	1932-33	1933-34	1934-35	1935-36	1936-37	1937-38	1938-39
Maskat Territory & Tracial Oman..	...	...	...	18	53	9	33	27
Other Native States in Arabia ...	40	33	40	32	22	10	24	88
Iraq ...	40	41	62	61	78	119	133	163
French Indo-China ...	...	...	...	...	...	...	25	...
Egypt ...	592	3026	1916	3299	331	293	4572	25641
Tunis ...	...	...	...	...	...	...	143	88
Morocco Fr. Protectorate ...	...	...	...	...	...	...	...	438
French West Africa ...	...	...	...	...	1909	...	...	...
U. S. A. (via) Atlantic coast ...	...	...	1100	28	131	9	1115	5027
,, Pacific coast ...	...	...	...	...	...	...	...	23
Uruguay ...	...	...	...	...	...	...	...	822
Argentine Republic including Atlantic coast of Patagonia ...	...	...	...	...	...	...	...	1000
Other Foreign Countries ...	42	14	34	...	7	40	3	26
Total Foreign Countries ...	591,770	399,061	485,360	368,697	344,796	596,618	507,887	704,671
Total Export* ...	671,973	433,012	546,276	487,293	664,389	650,752	816,253	835,103

Note.—The above figures have been taken from "Sea-borne Trade of India." It should be noted however that there are slight discrepancies in the figures given in the " Sea-borne Trade of India " and in the " Review of Trade of India."

Table X—*Continued*

Distribution of Exports of Groundnut—Foreign countries

	1931-32	1932-33	1933-34	1934-35	1935-36	1936-37	1937-38	1938-39
Sweden ...	4712	...	818	...	...	...	301	1210
Norway ...	4989	2496	2300	6201	2307	2016	2616	10012
Poland (including Danzig) ...	...	...	...	1550	...	...	70	...
Denmark ...	4133	1501	6818	5896	410	7044	5116	22902
Germany ...	121751	48129	97249	65116	71268	110056	107977	115210
Netherlands ...	147192	87474	100855	114813	95161	175435	146455	231676
Belgium ...	4457	8627	13491	13951	9196	38731	43730	65782
France ...	223241	219447	188080	99262	140697	172973	72345	149783
Spain ...	100	...	...	...	4	2000	21	...
Portugal (including Azores & Madeira) ...	...	...	...	3709	4251	8896	5029	5236
Switzerland ...	...	...	...	...	...	...	665	400
Italy (including Fiume) ...	80344	28214	72413	54370	17765	76140	111647	34576
Austria ...	...	...	...	...	...	...	185	...
Czechoslovakia ...	...	...	...	...	...	...	4722	33272
Greece (including Crete) ...	35	10	268	325	537	365	157	8
Turkey (Asiatic) ...	7	...	4	5	650	2380	554	10
Syria ...	95	49	182	61	9	52	249	1039

Table X—*Continued*

Exports of Groundnut—British Empire

	1931–32	1932–33	1933–34	1934–35	1935–36	1936–37	1937–38	1938–39
United Kingdom (including Channel Islands) ...	77,933	31,643	52,821	134,196	62,399	134,930	94,624	96,406
Palestine ...	90	1083	4947	2050	...	4313	3752	7568
Aden & Dependencies ...	36	38	37	35	40	41	68	280
Ceylon (excluding Maldives) ...	523	389	637	626	935	497	700	908
Burma ...	...	...	...	...	...	...	5530	11,841
Straits settlements ...	193	67	674	3475	287	571	2027	1,691
Federated Malay States ...	...	...	132	205	437	503	356	112
Hong Kong ...	...	...	...	...	...	14	581	150
Union of South Africa ...	1400	700	950	700	1996	...	877	7,102
CANADA:								
(*via*) Atlantic coast ...	...	...	4	236	702	1470	2359	3,722
Pacific coast ...	...	...	...	...	...	...	45	295
Newfoundland & Labrador ...	...	...	...	...	...	30	...	...
British West India Islands (excluding Bahamas) ...	18	17	3	...	4	50	89	80
British Guiana ...	...	...	...	...	...	10	103	36
Commonwealth of Australia ...	...	...	672	916	930	400	350	178
Other British Provinces ...	10	14	39	58	41	36	22	63
Total British Empire ...	80,203	33,951	60,916	142,497	67,771	142,865	111,483	130,432

APPENDIX B

Abstract of the Report of the Administration of the South Arcot Groundnut Market Committee, Cuddalore, for the year ending 1940.

A study of the seasonal rainfall is an important factor in the cultivation of the crop. According to the report, the rainfall during the year under review was heavy but not evenly distributed. Scanty showers in summer delayed the preparation of land for cultivation, and a heavy downpour in November and December flooded the fields and also damaged the crop by delaying the harvest. The quantity of blacks showed an increase while the yield per acre declined. Thus an uneven distribution of rain adversely affects not only the production of the crop but the quality of the produce.

In 1940, the area under groundnut in the Madras Presidency is estimated at 3,820,000 acres, indicating an increase of 5·6% over the former year's acreage. During the same period, South Arcot had 375,000 acres under groundnut, which is nearly 9·8% of the total area devoted to this crop in the Presidency. In 1939, this area was 400,100 acres. The 1940 figure shows accordingly a decrease of 6·3%. The year's yield per acre is also said to be only 70% of the normal yield. This lower yield has been attributed to the uncertain climatic conditions of the year under review.

Discussing the position of the trade in the district, it has been observed that out of the total arrivals in all markets in the district which amounted to 64,500 tons of kernels, the exporters purchased 90% and the local press-owners and oil-crushers consumed 7·7%. About 14,000 tons have been estimated to be reserved as seed and the consumption of the nuts as food is nearly 1000 tons. Exports by sea have come to nearly 79,211 tons of kernels while 6,801 tons have moved to Madras and other places through inland traffic. For future sale the ryots have stored 7,000 tons and the exporting firms had on hand 16,806 tons at the close of the year. The figures cannot be taken as accurate, for exact information regarding the retention of the produce in the villages for future sale and for use as seeds, for food or for crushing by local chekkus, etc., is not forthcoming.

As regards prices, it was seen that in the beginning of 1940, the prices per candy was Rs. 30-3-0. But by the end of January, it fell to Rs. 20-3-0 owing to a decrease in demand. There was no change in February and the price went up in March owing to a new but limited demand from exporters and remained at Rs. 34-7-0 till the end of April. But soon the downward trend set in. The closure of foreign markets affected exports seriously and the price went as low as Rs. 22-12-0 in August. Except for a slight rise in September, the downward trend of the price continued owing to a glut in the market resulting from restricted exports and the arrival of fresh stocks for sale. In November and December the price was Rs. 19-3-0. Concerning the future of the price of groundnut, the Committee observe:—

"It is practically impossible to forecast with any degree of certainty the future of groundnut prices under the present international situation and the outlook continues to be obscure owing to the closure of Continental markets and the consequent falling off in export demand."

To increase the number of regulated markets, the Committee recently opened a market yard at Villupuram. This brings the number of such markets in the district to six. A comparative statement of the total quantity of groundnuts dealt within the market yards is given below:—

Markets.	No. of premises doing business.	Arrivals in 1940.		Percentage.
		Market Centre (Tons).	Market. yard (Tons).	
Cuddalore ..	21	10,275	495	4·8
Ulundurpet ..	13	8,800	938	10·7
Vriddhachalam ..	17	8,950	520	5·8
Tirukoilur ..	20	7,000	710	10·1
Villupuram ..	8	19,500	760	4·0
Tindivanam ..	30	10,000	766	7·7

The arrivals at the market yard were satisfactory; but they would have been better if unhealthy competition from certain interested quarters and the antagonistic attitude of some of the traders could have been

avoided. It is hoped that in subsequent years, the arrivals at the market yards will greatly increase, as the cultivators have already begun to understand the efficacy of the regulated market.

The petty traders found the license fees to be heavy and made a representation to this effect to the Committee. The licence fees have now been reduced. The following figures show the number of licences and registrations issued by the Market Commitee:—

		1940
Licences:		
Licences [under section 4 (1)]	..	1614
Weighment	..	767
Brokers	..	17
Registrations:		
Buyers and sellers	..	2380
Buyers alone	..	42
Sellers alone	..	8
Authorisations issued	..	928

Malpractices in weights and measures prevail in villages; but it has been found difficult to check them as few who complained came forward with proofs. Whenever excess commissions were levied by the traders and brought to the purview of the Committee, the traders were asked to return the excess amount to the parties concerned. The weighmen were all severely warned when cases of incorrect weighments were found or reported. Many petty traders in the villages who were avoiding registration were found out and compelled to register themselves as traders.

Lastly, the Committee which has the power to revise contract forms under Rule 19 (A), have constituted a sub-committee to study the matter and evolve a suitable contract form. Suggestions from interested parties have been invited. The question is now on the anvil of the Committee.

The Committee hope for better progress in the years to come and they believe that such difficulties as are felt at present in their working are usual to similar services in their initial stages.

APPENDIX C

Questionnaire

1. What is the average yield per acre in different districts of the Presidency for a period of 20 years, *i.e.*, from 1919 to 1940 ?
2. How much of total production of the Presidency is being retained in the villages and for what purposes ?
3. How much of total production is being pressed
   (1) by Village Chekkus (ghanis),
   (2) by Presses ;
   (3) by Expellers.
4. To which foreign markets do our ports export from 1920 ?
5. Is there any import of groundnut into the Presidency from outside areas ? Mention their quantity in respect of years from 1920 onwards.
   (b) Why is it imported? Give reasons.
   (c) What happens to this imported quantity?
6. Is any groundnut oil imported ? Why ?
7. Is there any import of cake ? Why ?

Quality.

8. What are the varieties of groundnut grown and in what areas ?
9. (*a*) Which kind yields maximum oil ?
   (*b*) What is the average yield and total production of each variety ?

Prices.

1. Is there any provision for market intelligence ?
2. Record the Port prices and market prices of Cuddalore and Madras from 1919-41.

3. Prices of London Market, German, Marseilles and other Continental markets.

4. Get contract forms—fixed and unfixed—from branches of Ralli, Luois Dreyfus, East Asiatic and other exporting firms dealing in groundnut.

5. What is the percentage of refraction prevalent in branch agencies of the same firms in Bombay? If possible give the contract forms.

6. What is the percentage of refraction allowed by the Home Office to the buying agencies of the above firms ?

7. What are the reasons you attribute for seasonal variations in prices ?

8. Give an idea of the cost of cultivation of an acre of Groundnut in the important growing centres of this Presidency, *viz.*, South Arcot, North Arcot and Guntur under the following heads for the irrigated as well as rain-fed crops*

Preliminary cultivation

Number of ploughing, at what rate?

Manures and manuring

Number of cart loads of what manure and at what rate ? (including cart hire.)

Charges for spreading the manure.

Seed and sowing.

Number of measures of pods at what cost?

Dibbling the seeds at so many coolies at what rate ?

After cultivation

Number of hoeings and weedings, by how many coolies and at what rate ?

Irrigation

Number of irrigations and cost of each.

*N.B.—If Groundnut is sown as a mixed crop, say how much of the cost under each item should be allotted to Groundnut ?

Charges after harvesting

9. Cost of winnowing of a bag of Groundnut or the produce of one acre approximately.

10. *Assembling* : What percentage of total produce of the Presidency brought to the market

(*a*) by cultivators ;

(*b*) by village merchants and money-lenders ;

(*c*) by wholesale dealers ;

(*d*) by crushers' buying agents ;

(*e*) by producers' co-operative societies ;

(*f*) by Marketing Committees.

11. *Markets* : If there are any markets, e.g. shandies, an idea of the market practices and charges collected in various markets under the following heads :—

(*a*) Taxes and tolls ;

(*b*) Commission and brokerage ;

(*c*) Handling charges ;

(*d*) Charges for other services ;

(*e*) Charities ;

(*f*) Quality and weight allowances ;

(*g*) Miscellaneous.

12. 1. What are the impediments in the way of grading and standardization ?

2. Is there any discrimination in railway rates so as to favour exports instead of favouring internal consumption ?

3. What is the effect of storage on quality ?

4. How many crushing establishments exist in this Presidency :—

   Chekkus, Presses and Expellers.

5. What is the cost of crushing a unit of Groundnut per each method ?
6. Is there any difference in quality of the oil obtained by the different methods ?
7. What are the uses of the oil ?
8. To which places is this oil exported ?
9. What is the quantity of oil exported from 1920 onwards ?
10. Mention the price of oil from 1920 onwards.
11. Is there any adulteration of the Groundnut oil ?
12. How is it adulterated ?
13. What is the total production of oil ?

Cake.

1. What is the total export of cake ?
2. What are its uses internally ?
3. Is there any difference in the price of cake produced by chekkus, and expellers?
4. If it be so, mention the prices.
5. What is the railway freight for oil and cake ?

13. *Weights and measures.*

What are the weights used ?

Are they checked?

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INDEX

Agricultural Research in.

Experiments to increase the yield, 30.
Electro-culture, 33.
Measures to ward off pests and diseases, 35
Quality of measures to improve, 39.
Seed-varieties of, 39.

Cultivation.

Cost, 5.
Acreage of, 10.

Remedy to check the fall in.

Restriction of output, 114.
Subsidy, 115.
Substitution, 116.
Local consumption, 116.

Finished Products.

Oil, 108-110.
Cake, 109.

Export.

Fluctuation in, 85.
Value of, 88.
Madras, 89.
Foreign Countries, 89-94.
Effect of war, 94.

Markets.

Institution of Regulated ones, 56.
C.P. 57.
Madras, 60.
Hyderabad, 61.
Punjab, 62.
N.W.F., 62.
Constitution of committees, 57.
Madras commercial produce Market Act, 64.
South Arcot groundnut Market committee, 64.
Constitution of, 64.
Functions of, 65.

Disputes sub-committee.

Constitution of, 65.
Functions of, 65, 72.
Features of, 66.
Licensed traders, 67, 70.
Marketing yards, 66, 74, 75.

Marketing.

Low prices effected by producers Reasons for, 41.
Fraudulent methods of shedmen, 42.
Traders' Associations, 44.
Share of the producer, 47.
Exporting firms; classes of transactions, 45.
Forward contract, 45.
Unfixed contract, 45.
Spot transaction, 45-46.
Importance of, 50.
Conditions of Rural, 50.
Sale societies, 52.
Central sale society at Cuddalore, 53-55.
Agricultural commission, 56-57.

Prices.

Trend of, 97.
Causes for decline, 98, 99, 112.
Seasonal fluctuations in, 99.
Effect of war, 100.
Manner of fixing, 103.

Production.

World, 21.
India, 22.
Madras Presidency, 26.
Yield per acre, 25.

Transport charges, 76.

Railway rates, 78-81.
Import of, 82-84.

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